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MARGINAL PIPELINE COSTS OF ENLISTED PERSONNEL.(U)

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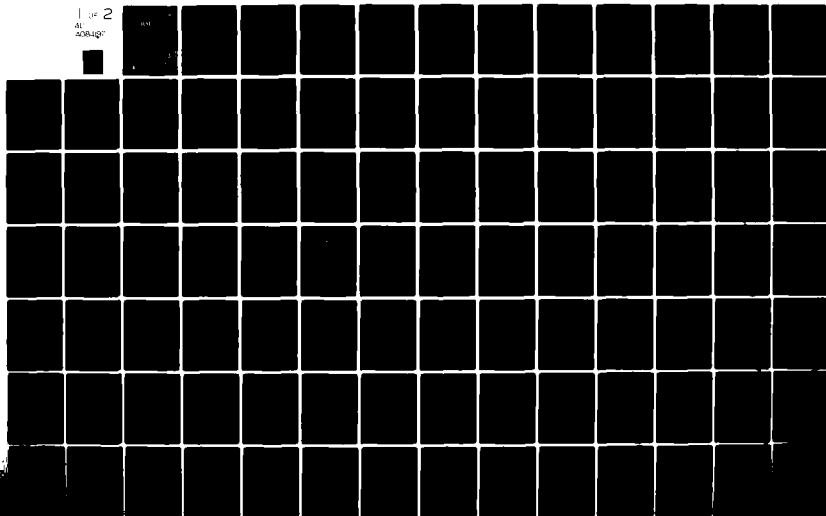
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TR-7808-1

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MARGINAL PIPELINE COSTS OF ENLISTED PERSONNEL

LEVEL by

Rodney D. McConnell
Gerald R. McNichols

3 December 1979

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20. Abstract (Cont'd)

→ expanded the results to include variable costs of attrition and variable costs per accession for the entire first term of enlistment. The cost data and costing methodology should be useful to the Department of Defense in examining first term accession manpower costs during the Program and Budget cycles. The information is equally helpful to DoD studies of any of the pipeline activities such as Recruit Training.

This report summarizes the methodology and results for active first term male enlisted personnel and can be used as a close approximation for all accessions. A consistent methodological approach was developed by MCR including Work Breakdown Structure (WBS) elements that permit examination of reasons for cost differences. Costs were separated into Training and Non-Training cost elements (and lower level sub-elements) with further classification by Service, Appropriation, type of school, etc. Cost and manpower variable input factors are described. ←

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MANAGEMENT CONSULTING & RESEARCH, INC.

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MARGINAL PIPELINE COSTS OF ENLISTED PERSONNEL

by

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EXECUTIVE SUMMARY

Management Consulting & Research, Inc. (MCR) has developed an estimate of the "Marginal Pipeline Cost of Enlisted Personnel" and a 'top down' research methodology for updating these costs under contract MDA903-79-C-0095 with the Defense Supply Service-Washington. The sponsor of this work was Dr. G. Thomas Sicilia, Office of the Assistant Secretary of Defense, Manpower, Reserve Affairs, and Logistics.

This research project was accomplished in two phases: November 1978 - April 1979, and May 1979 - October 1979. The preliminary phase developed definitions and identified precise activities and associated variable costs for the "pipeline" from recruitment to arrival at first duty assignment (see Appendices A & B). The second phase expanded the results to include variable costs of attrition and variable costs per accession for the entire first term of enlistment. The cost data and costing methodology should be useful to the Department of Defense in examining first term accession manpower costs during the Program and Budget cycles. The information is equally helpful to DoD studies of any of the pipeline activities such as Recruit Training.

This report summarizes the methodology and results for active first term male enlisted personnel and can be used as a close approximation for all accessions. A consistent methodological approach was developed by MCR including Work Breakdown Structure (WBS) elements that permit examination of reasons for cost differences. Costs were separated into Training and Non-Training cost elements (and lower level sub-elements) with further classification by Service, Appropriation, type of school, etc. Cost and manpower variable input factors are described.

The variable costs per accession for FY1978 are displayed on the following page and are broken out by WBS cost category. The individual sections of the report provide detailed appropriation and category information and methodology. An analysis of the differences in cost among the Services is provided in Section IV of this report.

Since this was a 'top down' research effort accomplished in a relatively short period of time, several general cautions must be noted:

- DoD standard accounting and budgetary systems do not provide data that would enable a researcher to identify variable costs in any consistent manner;
- Some of the data used in the report is based on subjective allocations of resources made by the Services;
- Variable costs are subsets of total cost and thus subsequent allocations of the Service data were made on a conservative basis;
- For internal programming decisions the resultant marginal cost factors are only useful as a conservative estimate of the marginal costs of accessions;
- The data are not useful for studies involving base re-alignment, training consolidations, or other efforts dealing with specific proposals at individual installations;
- The initial Service allocations cannot be used as a substitute for the data in the MMTR, which shows the total resources available to the training establishment for mission accomplishment.

All costs are described on a "per accession" basis. This means we include the costs of those who attrite in the total variable costs, but prorate these costs over all accessions. This includes both cost per accession who attrites and straight cost per accession; i.e., "replacement" costs.

FY78 VARIABLE COST
PER NPS ENLISTED MALE ACCESSION (\$)^{4/}

<u>WBS Cost Category</u>	<u>ARMY</u>	<u>NAVY</u>	<u>USMC</u>	<u>USAF</u>	<u>DoD (Ave)</u>
1.0 Training Costs	<u>4,673</u>	<u>4,754</u>	<u>3,921</u> ^{3/}	<u>3,961</u>	<u>4,435</u>
1.1 Mission	<u>1,227</u>	<u>967</u>	<u>532</u>	<u>452</u>	<u>904</u>
1.1.1 P&A Military	705	787	335	385	612
1.1.2 P&B Civilian	60	96	6	--	50
1.1.3 Other Mission	462	83	191	67	242
1.2 Support	<u>607</u>	<u>981</u>	<u>492</u>	<u>645</u>	<u>701</u>
1.2.1 P&A Military	103	244	173	209	173
1.2.2 P&B Civilian	270	565	242	269	346
1.2.3 Other Support	234	172	77	167	182
1.3 Trainee Pay and Allowances	<u>2,839</u>	<u>2,807</u>	<u>2,797</u>	<u>2,864</u>	<u>2,830</u>
2.0 Non-Training Costs	<u>4,661</u>	<u>3,611</u>	<u>4,041</u>	<u>2,752</u>	<u>3,903</u>
2.1 Recruiting ^{1/2/}	<u>2,391</u>	<u>1,906</u>	<u>2,053</u>	<u>1,203</u>	<u>1,973</u>
2.2 Examining ^{2/}	149	149	149	149	149
2.3 Personnel Processing	783	752	702	690	746
2.3.1 Processing In	88	86	86	60	82
2.3.2 Clothing Issue	396	375	363	380	383
2.3.3 Processing Out	88	86	86	60	82
2.3.4 Separation Payment	211	205	167	190	199
2.4 Permanent Change of Station	<u>434</u>	<u>468</u>	<u>389</u>	<u>413</u>	<u>433</u>
2.4.1 Accession PCS	330	340	267	295	317
2.4.2 Separation PCS	104	128	122	118	116
2.5 Disciplinary	<u>216</u>	<u>163</u>	<u>285</u>	<u>45</u>	<u>173</u>
2.5.1 Administrative	17	24	30	12	24
2.5.2 Prisoner	152	118	181	32	125
2.5.3 Deserter	47	21	74	1	24
2.6 Medical ^{2/}	<u>238</u>	<u>173</u>	<u>173</u>	<u>252</u>	<u>214</u>
2.7 Enlistment Bonus ^{1/}	<u>450</u>	N/A	<u>290</u>	N/A	<u>215</u>
	<u>9,334</u>	<u>9,365</u>	<u>7,862</u>	<u>6,713</u>	<u>8,338</u>

^{1/}Applies only to male high school diploma graduates
Accession cost for non-HSDG males should be adjusted accordingly.

^{2/}Average cost used as variable cost.

^{3/}Does not include \$177 of USMC Training Cost from other Services.

^{4/}Some totals may not add due to rounding.

ACKNOWLEDGEMENTS

The results reported here have benefited greatly from the technical direction provided by Dr. G. Thomas Sicilia, OSD, in his review of a prior draft, and the work provided by Management Analysis, Inc. (MAI) as a first phase subcontractor.^{1/} In particular Dr. T. Arthur Smith developed an initial Army training cost methodology which was expanded upon in this report. Mr. Jerry Driscoll and Mr. Arthur Smith of MAI also provided essential support as did several members of MCR's staff.

^{1/} R. McConnell, G. McNichols, T. Smith, "Marginal Pipeline Cost of Enlisted Personnel, Draft Final Report," FR-7808, 2 April 1979, Management Consulting & Research, Inc., Falls Church, Virginia 22041

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I. INTRODUCTION

This report describes the results of a research project to develop marginal "pipeline" costs of enlisted personnel using a 'top down' methodology. The work was sponsored by Dr. G. Thomas Sicilia, Office of the Deputy Assistant Secretary of Defense (Requirements, Resources, and Analysis). This section describes the following:

- Background
- Purpose/Scope of Research
- Outline for Remainder of Report

A. BACKGROUND

With the advent of the All Volunteer Force (AVF), attention has been focused in recent years on the problem of high enlisted first-tour attrition.^{1/} In particular, many people are concerned that the cost of accessing a new recruit has not been accurately determined.

The first major study to calculate average costs per accession was only recently performed (July 1977^{2/}). Several OSD analysts have utilized that data for resource allocations related to the All Volunteer Force. There is, however, a broad problem which cuts across the entire manpower programming and accounting area. This problem is the lack of standard, formal DoD definitions. The lack of definitions has caused

^{1/} See for example WN-7806-2, "Alternative Methodologies for Direct Calculation of Non-High School Accession Requirements," or WN-7806-3, "Impact of Length of Service Distribution on Enlisted Attrition," Management Consulting & Research, Inc. (MCR), Arlington, Va., October 1978.

^{2/} Dr. G. T. Sicilia, "Attrition Issue Costing," OASD MRA&L PR, 10 July 1977.

numerous problems in OSD's attempt to determine appropriate resource allocations for AVF or other issues.

The lack of a precise, consistent costing methodology based on accurate definitions is particularly crucial to studies requiring "pipeline" costs for first term accessions. Pipeline costs have been frequently defined as the accession costs devoted to travel, i.e., transients. The MCR research, however, first defined "pipeline" to cover the period from recruitment to arrival at first duty assignment: (Phase A study from November 1978 - April 1979); the definition was later expanded to cover costs per accession for the entire first term (Phase B study from May 1979 - October 1979). Thus, in this report, we refer to "pipeline" costs as training and non-training costs incurred over the entire first tour accession period. The cost data and the methodology to be described should be useful to DoD in examining first term accession manpower costs during the Program & Budget Cycles.

B. PURPOSE/SCOPE OF RESEARCH

The major objective of the research was to develop the "best" set of marginal "pipeline" costs of male enlisted personnel (non-prior service) based on FY78 data. In addition, a consistent (across Services) 'top down' methodological approach was developed by MCR including Work Breakdown Structure (WBS) elements that permit examination of reasons for cost differences. Costs are separated into Training and Non-Training cost elements (and lower level sub-elements) with further classification by Service, Appropriation, type of school, etc. Cost and manpower variable input factors are also described.

The overall concept was to delineate the accession process within each Service, chart the process in a generalized network format, and then develop a WBS for Training and Non-Training

costs so that the individual cost elements could be identified by arcs within the networks and costed individually. Cost factors and variable manpower factors used to calculate a value for each cost element could then be defined consistently across Services. Appropriations and program elements were referred to where relevant. A special requirement was to identify marginal or variable costs (rather than average total costs) which could be used to assist in determining additional or reduced resource requirements associated with a change in the number of programmed accessions for each Service.

The research was directed to the major segment of military accessions, i.e., non-prior service (NPS) male, enlisted personnel. However, the factors developed in this analysis may be used to approximate the costs of other accessions. The period of the accession process for the preliminary phase study covered initial entry (AFEES) into recruit training, through the training pipeline, to arrival at first duty station. The second phase of the study included variable costs per accession for the entire first term. Thus, costs for personnel processing (processing in, clothing issue, processing out, and separation payment) are specifically included. This report covers all first term costs per accession including pre-entry costs of recruiting and examining.

Definitions useful to the MCR analysis are given in Appendix A (and repeated where necessary for clarification in the report). The Generalized DoD Accession Process and individual Service Accession Processes are described in detail in Appendix B.

For ease of reference, a table of Active Force Enlisted Accessions developed by OASD (MRA&L) is presented on the next page. The relevant lines for much of this report are those labelled "NPS Male" and "MHSDG" (Male High School Diploma Graduate).

	FY 80 President's Budget			
<u>Service</u>	<u>FY 77</u> <u>Actual</u>	<u>FY 78</u> <u>Actual</u>	<u>FY 79</u> <u>Plan</u>	<u>FY 80</u> <u>Plan</u>
<u>DoD</u>				
All Sources	410.8	331.7	372.6	378.5
PS	23.3	19.8	22.3	24.7
NPS Total	387.5	312.0	350.3	353.8
NPS Male	356.4	273.7	306.8	305.9
(MHSDG)	(240.4)	(205.5)	(223.0)	(222.3)
NPS Female	31.2	38.3	43.5	47.9
<u>Army</u>				
All Sources	180.7	134.4	164.4	165.4
PS	12.3	10.4	12.1	12.0
NPS Total	168.4	124.0	152.3	153.4
NPS Male	153.4	106.5	132.4	131.5
(MHSDG)	(86.2)	(74.6)	(87.6)	(85.8)
NPS Female	15.0	17.5	19.9	21.9
<u>Navy</u>				
All Sources	109.5	87.0	92.3	98.9
PS	8.0	6.7	7.1	8.4
NPS Total	101.6	80.3	85.2	90.5
NPS Male	96.8	74.5	77.2	80.4
(MHSDG)	(69.0)	(56.5)	(58.7)	(61.1)
NPS Female	4.8	5.8	8.0	10.1
<u>Marine Corps</u>				
All Sources	46.9	41.0	46.6	42.7
PS	1.9	1.4	1.9	1.8
NPS Total	45.0	39.6	44.8	40.9
NPS Male	43.5	37.3	42.5	38.6
(MHSDG)	(30.0)	(27.5)	(31.9)	(30.0)
NPS Female	1.6	2.3	2.3	2.3
<u>Air Force</u> a/				
All Sources	73.6	69.3	69.2	71.5
PS	1.1	1.3	1.2	2.5
NPS Total	72.5	68.0	68.0	69.0
NPS Male	62.7	55.3	54.7	55.4
(MHSDG)	(55.2)	(46.9)	(44.9)	(45.4)
NPS Female	9.9	12.7	13.3	13.6

LEGEND: All Sources = NPS+PS
PS = Prior Service

NPS = Non-Prior Service
MHSDG = Male High School Diploma Graduate

NOTE: Numbers may not add due to rounding.

a/ Air Force MHSDG Plan in FY 79-FY 80 based on 82% of NPS Male Objective.

OASD(MR&L)/MPP/ASR
13 February 1979

Figure I-1. Active Force Enlisted Accessions
(In Thousands)

C. OUTLINE FOR REMAINDER OF REPORT

The remainder of the report is divided into three sections:

- II. Training Accession Costs
- III. Non-Training Accession Costs
- IV. Analysis

Section II initially discusses Training Cost and Manpower Factors, followed by subsections which present the accession process for each Service. The introduction to each Service subsection summarizes the FY78 cost results.

Section III discusses each Non-Training cost in a separate section including definitions, methodology, and results. FY78 cost data are presented and where available, FY79 and FY80 data.

Section IV examines some of the highlights of the analysis across all Services.

II. TRAINING ACCESSION COSTS

A. INTRODUCTION

Training costs are divided among direct and support activities and trainee pay and allowances:

- Direct training activities are those titled Mission activities since they perform the training function.^{1/}
- Support activities are those base operating functions which are installation or "support" oriented and are independent of the training function. The support activities permit the use of an installation for training.^{2/}
- Trainee pay and allowances are separately identified as a training cost so as not to be confused with instructor costs within the mission category.

More detailed definitions are provided in Appendix A.

1. Work Breakdown Structure

The overall concept is to separately identify costs by category of training within each Service in such a manner as to be consistent across Services. There are two major categories of training: Recruit Training and Initial Skill Training (including Other Service Initial Skill Training). Each Service has its own terminology and categories as described below. The Work Breakdown Structure (WBS) developed by MCR for training costs is displayed below:

1.1 Mission Cost

1.1.1 Pay & Allowances Military (Trainors)

1.1.1.1 Officer

1.1.1.2 Enlisted

1.1.2 Pay & Benefits Civilian (Trainors)

- ^{1/} Mission includes attributable portions of DoD Program Elements 84711, 84731, 84733, 84734, 84761, 86723 and 86761.
- ^{2/} Support includes attributable portions of DoD Program Elements 85794, 85795, and 85796.

- 1.1.3 Other Mission
 - 1.1.3.1 Operations & Maintenance
 - 1.1.3.2 Procurement
- 1.2 Support Cost
 - 1.2.1 Pay & Allowances Military (Base Support)
 - 1.2.1.1 Officer
 - 1.2.1.2 Enlisted
 - 1.2.2 Pay & Allowances Civilian (Base Support)
 - 1.2.3 Other Support
- 1.3 Trainee Pay and Allowances

Mission and Support costs are calculated for each category of training using the manpower driver of either total training load, workload or accessions, and the associated cost and manpower input factors. Trainee pay and allowances are calculated for the entire accession pipeline period of approximately six months after taking attrition into consideration. All training costs are aggregated on the Training Cost Summary tables at the end of this section with the total variable cost per accession computed using the methods discussed below.

A Training Cost Worksheet (Figure II-1) was developed to summarize relevant input data and calculations. Mission and Support Costs are computed in Column A for each training category using the proper Manpower Driver (Column B), Cost Factors (Column C) and Manpower Factors (Column D). Thus for each WBS line item:

$$(\text{Col. A}) = (\text{Col. B}) \times (\text{Col. C}) \times (\text{Col. D})$$

For information purposes other data can be listed such as the average number training, number completing training, number starting training, and the course duration. The individual Service sections that follow this introduction contain all cost data collected. Section G describes the Trainee pay and allowances costs for all Services.

An All Service Training Cost Summary by Work Breakdown Structure (WBS) cost element for FY1978 is provided in Figure II-2 and the same costs by appropriation are shown in Figure II-3. Backup data for these figures are provided in the Service sections.

2. Comparison of Service Cost and Manpower Factors

A brief comparison is made of Service provided cost and manpower factors. In some cases there are significant differences among the Services not easily explainable in our "top-down" analysis. We recognize this problem. For example, the Navy variable O&M costs appeared to be much too low and no Marine Corps procurement (ammunition) cost was available for Initial Skill Training. Therefore, we used the other Services average for the Navy O&M cost and the Army ammunition cost for the Marine Corps. Because of our desire to provide a better understanding of these differences, a detailed examination of Service factors via a "bottom-up" approach will be undertaken. MCR will analyze the basic structure of the training establishments, i.e., the structure of the training organizations and supporting elements. All factors are "per training load" since that is the most common term. (Synonymous with workload for the Marines.)

Training load is the total student manyears of a single Service in any particular category; e.g., Initial Skill Training, that are either trained by that Service or sent to other Services for training. We have treated training load as if it was workload, i.e., student manyears trained by that Service for all Services except the Marine Corps. The reason was that the number of students any Service trains for the others approximates the number being trained for it (other than in the case of the Marine Corps). For the Marines we have used workload and consequently the cost of "Other Service

Training" has not been counted (see page II-52 for a discussion of this issue). The table below demonstrates the distribution of Other Service training loads among the Services

Distribution of Other Service Initial Skill Training Loads
(FY78)

	<u>Trained for Other Services</u>	<u>Trained by Other Services</u>
Army	1174	726
Navy	3162	529
USMC	10	2888
USAF	<u>660</u>	<u>863</u>
	5006	5006

a. Variable Mission Manpower Factors

In this category the main difference lies in the interpretation of what manpower is "variable." The Army and Navy, due to extremes in accession patterns, have included other direct mission manpower along with instructors as variable costs. This is not the case for the Air Force and Marine Corps (see page IV-1 for variation of NPS accessions). Another cause for differences is the type and method of training. For example, Army and Marine Corps Recruit Training is very labor intensive due to the emphasis on weapons usage which requires individual attention for both safety and understanding. Navy Initial Skill and Advanced Skill Training ("A" and "C") are very labor intensive because of the complexity of the equipment. The following table compares Service variable mission manpower by training category. The figures are taken from the Service factors given in Section II-B "Cost and Manpower Factors." Note that the "average" is for comparison and is not the number used.

Variable Mission Manpower per Training Load^{1/}

<u>Training Type</u>	<u>ARMY</u>	<u>NAVY</u>	<u>USMC^{2/}</u>	<u>USAF^{3/}</u>
Recruit	.1711	.1070	.1018	.06553
OSUT	.1812	--	--	--
Apprentice	--	.1440	--	--
Initial Skill	.1800	.2450	.1389	.1256
Advanced Skill	.1934	.5160	--	--
Average ^{4/}	.1789	.1978	.1113	.1074

1/ Officer, Enlisted and Civilian factors combined proportionally where applicable.

2/ USMC is variable manpower per workload (USMC schools only).

3/ USAF is conversion of variable manpower per accession to variable manpower per training load using FY1978 data (AF/MPP/TP-ST).

4/ Service average factor computed by multiplying type of training factor by its load and dividing sum of all these by sum of loads.

b. Variable Support Manpower Factors

The higher Navy manpower factor is attributable to the large number of installations used for training which negates some efficiencies of scale (for example the Navy has three Recruit Training Centers and 34 Specialized Skill Training installations compared to 1 and 8 for the Air Force). The lower Army manpower factor is attributable to the use of troop labor to support training. Due to a lack of data the Marine Corps factor is based on the Air Force factor and is therefore essentially the same.

Variable Support Manpower per Training Load^{1/}

<u>ARMY</u>	<u>NAVY^{2/}</u>	<u>USMC</u>	<u>USAF</u>
.0671	.1491	.0945	.0986

1/ Combines Officer, Enlisted and Civilian factors proportionally.

2/ Combines Support Manpower factors by type of training.

c. Variable Cost Factors

(1) Variable Mission Cost Factors

The variable mission cost factors were those we received from the Services. Some Marine Corps factors were derived from Marine Corps budget data since only one factor (Recruit Training O&M) was available. The difference between Navy and other Service's variable O&M is significant and not explainable, therefore, we used the other Service's average O&M cost for the Navy. Army, Air Force, and Marine Corps are fairly close. Procurement is ammunition, except that large variable equipment (tanks, artillery) is included for the Army. Note that the "average" is only shown for comparison purposes.

Variable Mission Cost Per Training Load

(\$ by Appropriation)

Training Type	ARMY		NAVY	USMC ^{1/}		USAF
	O&M	PROC	O&M	O&M	PROC	O&M
Recruit	159	544	15.37	113	332	252
OSUT	334	1605	--	--	--	--
Apprentice	--	--	102.07	--	--	--
Initial Skill	241	1061	22.32	437	491	155
Advanced Skill	515	--	18.79	--	--	--
Average ^{2/}	261	1044	215.00 ^{3/}	200	412	184

^{1/} Derived by MCR from Marine Corps data on a workload basis (USMC Schools only).

^{2/} Service Average factor computed by multiplying type of training cost factor by its load and dividing sum of these by the sum of the loads.

^{3/} Actual Navy O&M cost was 21.67 which appeared too low. The average of the other Services was used.

(2) Variable Support Cost Factors

The variable support cost factors were those we got from the Services except for the support portion of Marine Corps Initial Skill Training which was derived from FYDP data (see p. II-24). The Navy figures were significantly different from the other Services and not explainable, therefore, we used the other Services Average O&M cost for the Navy since that appeared to be reasonable.

Variable Support Cost Per Training Load

(O&M \$)

<u>ARMY</u>	<u>NAVY</u> ^{1/}	<u>USMC</u> ^{2/}	<u>USAF</u>
619	443 ^{3/}	237	473

1/ Combines Support factors by type of training (see p. II-20).

2/ Per Workload (USMC Schools).

3/ Actual Navy factor was \$89.40 which appeared too low. The average of the other Services was used.

Service

FY

Training Category

	A \$ 1/ Total	B Manpower Driver (Training/ Load) $\frac{2}{3}$	Average Number Training $\frac{3}{4}$	Number Completing $\frac{4}{5}$ Training	Number Starting $\frac{4}{5}$ Training	Course Duration $\frac{5}{6}$	C Cost Factor $\frac{4}{5}$	D Manpower Factor $\frac{4}{5}$
1.0 Training Cost:								
1.1 Mission Cost:								
1.1.1 P&A Military								
1.1.1.1 Officer								
1.1.1.2 Enlisted								
1.1.2 P&B Civilian								
1.1.3 Other Mission								
1.1.3.1 O&M								
1.1.3.2 Procurement								
1.2 Support Cost:								
1.2.1 P&A Military								
1.2.1.1 Officer								
1.2.1.2 Enlisted								
1.2.2 P&B Civilian								
1.2.3 Other Support								

II-8

Figure II-1. TRAINING COST WORKSHEET

1/ Column B x Column C x Column D.

2/ Also, may use workload or accessions if that is the manpower driver for the Cost/Manpower factors.

3/ Derived from: (# completing + # starting) \div 2.

4/ Service provided.

5/ Training load \div Average number training (contains recycles).

	Army	Navy	Marine Corps	Air Force	DOD ^{1/}
1.0 Training Cost	4,673	4,754	3,821	3,961	4,435
1.1 Mission Cost	1,227	967	532	452	904
1.1.1 P&A Military	705	737	335	385	612
1.1.2 P&B Civilian	60	96	6	--	50
1.1.3 Other Mission	462	83	191	67	242
1.2 Support Cost	607	981	492	645	701
1.2.1 P&A Military	103	244	173	209	173
1.2.2 P&B Civilian	270	565	242	269	346
1.2.3 Other Support	234	172	77	167	182
1.3 Trainee Pay and Allowances	2,829	2,807	2,797	2,864	2,830

1/ Weighted average $\left[\frac{\sum (\text{Service Cost} \times \text{Service Active Male NPS Accessions})}{\sum \text{Active Male NPS Accessions}} \right]$ ÷

Figure II-2. ALL SERVICE FY1978 TRAINING COST SUMMARY BY WBS
(Per Active Male NPS Accession)

	MP ^{1/}	O&M	Proc	Total
Army	\$3,647	\$663	\$363	\$4,673
Navy	3,838	916	--	4,754
USMC	3,305	390	125	3,821
USAF	3,458	503	--	3,961
DoD ^{2/}	3,614	636	158	4,408

^{1/} Includes trainee pay and allowances.

^{2/} Weighted average of all Services.

Figure II-3. ALL SERVICE FY1978 TRAINING COST SUMMARY BY APPROPRIATION
(Per Active Male NPS Accession)

B. COST AND MANPOWER FACTORS

Cost and manpower factors explained in this section were used to develop the Training Cost Worksheets in the individual Service sections. After a sub-section on trainor costs, we proceed to describe the factors for each Service in a separate sub-section according to a consistent format. The individual factors by service are not the same for the reasons discussed previously (see P.II-3). Trainee pay and allowance factors are separately discussed in Section G.

1. Military Trainor Pay and Allowances and Civilian Trainor Pay and Benefits Cost Factors

These cost factors are common to all Services and all categories of training and were derived from the data reported in the FY1980 President's Budget. We checked these factors where possible against Service training specific costs and found them to be sufficiently accurate.

a. Average Pay and Allowances - Military

The following costs are taken from the Jan. 1979 FYDP and are therefore actuals for FY78. In addition we show average costs per manyear for FY79 and FY80^{3/} since these are reported in the FY1980 President's Budget. The costs are derived by dividing the Service MilPers budget cost for pay, allowances, special pay, FICA, and bonuses by total manyears for a particular fiscal year. These manyear costs were used for military trainors.

FYDP military manyear cost by Service & FY:^{3/}

	<u>FY78</u>	<u>FY79</u>	<u>FY80</u>
Army Officer	\$21,877	\$22,985	\$22,900
Enlisted	10,073	10,707	10,814
Navy Officer	23,544	24,808	24,851
Enlisted	10,056	10,710	10,833

^{3/} Source: Jan. 1979 FYDP. FY80 does not include pay raise.

	<u>FY78</u>	<u>FY79</u>	<u>FY80</u>
USMC Officer	\$20,741	\$22,044	\$22,260
Enlisted	8,841	9,439	9,946
USAF Officer	24,267	25,360	25,199
Enlisted	10,377	10,906	10,943

b. Average Pay and Benefits - Civilian

The O&M total costs for each Service for each year included in the FY1980 President's Budget, are divided by total civilian manyears (O&M) for the particular fiscal year. These costs were used for civilian trainors.

FYDP civilian manyear cost by Service & FY:^{4/}

	<u>FY78</u>	<u>FY79</u>	<u>FY80</u>
Army	\$16,547	\$17,136	\$17,452
Navy	17,591	18,624	19,066
USMC	16,365	17,549	18,031
USAF	17,656	18,556	18,919

2. Army Cost and Manpower Factors

The Army has developed a number of Manpower Estimating Relationships (MERs) and Cost Estimating Relationships (CERs) which they use for training cost analysis. These contain a fixed and a variable part in the form $Y = a + bx$, where a is the fixed cost and b is the variable cost for Y = total recurring cost and x = training load. These are contained in the TRADOC Resource Factor Handbook^{5/}.

a. Variable Mission Factors

While MCR tried to use the TRADOC Resource

^{4/} Source: President's Budget Backup Sheep OP-8. FY80 does not include pay raise.

^{5/} TRADOC Resource Factor Handbook, Sept. 1978.

Factor Handbook^{5/} as a source of the variable training cost, it does not identify an MER for Recruit Training or One Station Unit Training (OSUT). For these two cases MCR used the Army 1978 Long Range Training Base Study^{6/} which contains cost data on a large number of areas to develop variable factors as follows:

(1) Recruit Training Manpower Factors

The variable cost was computed as follows:

- The Army study^{6/} for six Recruit Training installations provides a per trainee variable Mission manpower Cost of \$8.03 for civilians and \$294.34 for military (this includes both officers and enlisted). This can be translated to a variable manpower cost per training load as follows:

$$\text{Military: } \$294.34 \times \frac{365 \text{ days}}{58.4 \text{ days}} = \$1,841.18$$

$$\text{Civilian: } \$8.03 \times \frac{365 \text{ days}}{58.4 \text{ days}} = \$50.23$$

- The Handbook^{5/} (pp. 4, 38) shows the total workforce and training load for seven Recruit Training installations as follows:

Officers:	404
Enlisted:	4,944
Civilians	169

- The annual compensation (from Section B.1 above) for FY78 is:

Officers:	\$21,827
Enlisted:	\$10,073
Civilians:	\$16,547

- Computed variable manpower factors:

Let x = variable Officers per training load.

Let y = variable Civilians per training load

Let z = variable Enlisted per training load

Then z = 12.24 x (i.e., $\frac{4944}{404} = 12.24$) assuming same fraction of officer and enlisted staff is variable.

^{6/} Army 1978 Long Range Training Base Study files, Office of the Comptroller of the Army.

Now, variable military cost = variable officer cost
+ variable enlisted cost

$$\$1841.18 = (\$21,877)(x) + (\$10,073)(12.24x)$$

$$\text{So } x = \text{Officer per training load} = .0127$$

$$z = \text{Enlisted per training load} = .1554$$

$$\text{And } \$50.23 = (\$16,547)(y)$$

$$\text{So } y = \text{civilians per training load} = .0030$$

(2) OSUT Manpower Factors

The variable cost was computed as follows:

- The Army Study^{6/} for seven OSUT installations provides a cost per training load for Mission manpower.

Military: \$105.15 per training load

Civilian: \$1,915.67 per training load

- The Handbook^{5/} (pp. 8, 38) shows a workforce and training load for seven OSUT installations as follows:

Officers: 288

Enlisted: 3,531

Civilians: 298

Total Training Load: 8,890

- The annual compensation (from Section B.1 above) for FY78 is:

Officers: \$21,877

Enlisted: \$10,073

Civilians: \$16,547

- Computed variable manpower factor:

Let x = variable Officers per training load

Let y = variable Civilians per training load

Let z = variable Enlisted per training load

$$\text{Then } z = 12.26x \left(\frac{3531}{288} = 12.26 \right)$$

Now, variable military cost = variable officer cost
+ variable enlisted cost

$\$1,915.67 = (\$21,877)(x) + (\$10,073)(12.26)x$
 So $x = \text{officers per training load} = .0132$
 $z = \text{enlisted per training load} = .1616$
 And $\$105.15 = (\$16,547)(y)$
 So $y = \text{civilians per training load} = .0064$

(3) Initial Skill Training Manpower Factors

A TRADOC MER was taken from the Handbook^{5/} (pp. 37, 38) for Initial Skill Training (known as Advanced Individual Training or AIT by the Army). The MER developed for three installations is $y = 1100 + .180x$. This shows a total (includes officer, enlisted, and civilian) variable Mission manpower factor of .18 personnel per training load. The Handbook^{5/} (pp. 37, 38) manpower percentages for Mission personnel conducting Initial Skill Training are: Officer 7.1%, Enlisted 86.9%, and Civilian 6.0%. Thus by this calculation, the variable Mission factor by manpower type per training load is:*

Officers per training load = .0128
 Enlisted per training load = .1564
 Civilians per training load = .0108

(4) Advanced Initial Skill Training Manpower Factors

A TRADOC MER was taken from the Handbook^{5/} (pp. 39, 40) for Advanced Initial Skill Training. The MER developed for 17 installations is $y = 7075 + .197x$. This shows a variable Mission manpower factor of .197 personnel per training load. The Handbook^{5/} (pp. 39, 40) manpower percentages for Mission personnel conducting Advanced Initial Skill Training are: Officer 11.7%, Enlisted 68.9%, Civilian 17.6%, and other service (not used) 1.8%. Thus by this calculation, the variable Mission factor by manpower type per training load is:*

Officers per training load = .0230
 Enlisted per training load = .1357
 Civilians per training load = .0347

* Assuming ratio of variable to total is the same for all three types of people.

(5) Variable O&M Factors (Non-personnel)

TRADOC CERS were developed for variable O&M using the same installations that MERs were developed for. These CERS are in the same form as the MERs; i.e., $y = a + bx$ where b = variable O&M cost per training load. The CERS were taken from the Handbook^{5/}:

- Recruit Training (seven installations, Handbook^{5/} pp. 2-4): $y = \$1,247,779 + \$159x$.
- OSUT (seven installations, Handbook^{5/} pp. 2, 7-8): $y = \$4,556,571 + \$334x$.
- Initial Skill Training (three installations, Handbook^{5/} pp. 2, 5-6): $y = \$586,670 + \$241x$.
- Advanced Initial Skill Training (seventeen installations, Handbook^{5/} pp. 2, 9-11): $y = \$6,077,670 + \$515x$.

Thus according to the Handbook variable O&M cost per training load is:

- Recruit Training = \$159 per training load
- OSUT = \$334 per training load
- Initial Skill Training = \$241 per training load
- Advanced Initial Skill Training = \$515 per training load

(6) Variable Procurement Factors

Variable Procurement Costs were taken from the Army Study.^{6/} These costs are calculated by type of training. The following information was abstracted from this source for FY1978:

<u>Type</u>	<u>Cost per Trainee</u>		
	<u>Ammunition</u>	<u>Equipment</u>	<u>Total</u>
Recruit Training	\$ 77	\$ 10	\$ 87
<u>Cost per Training Load</u>			
OSUT	\$973	\$632	\$1,605

Recruit Training cost of \$87 per trainee translates to \$544 ($\$87 \times \frac{365 \text{ days}}{58.4 \text{ days}} = \544). Initial Skill was calculated by MCR as OSUT minus Recruit ($\$1605 - \$544 = \$1061$). This may be low since OSUT should save money from the separate Recruit plus AIT approach. Type costs are shown below:

<u>Type</u>	<u>Cost per Training Load</u>		
	<u>Ammunition</u>	<u>Equipment</u>	<u>Total</u>
Recruit Training	\$482	\$ 62	\$ 544
OSUT	973	632	1,605
Initial Skill Training	491	570	1,061
Advanced Initial Skill Training (not available)	--	--	--

b. Variable Support Factors

The necessary MER and CER for variable Support for all categories of training on an aggregate basis were taken from the TRADOC Resource Factor Handbook.^{5/}

(1) Variable Manpower Factors

The Handbook^{5/} (pp. 49-50) developed a TRADOC MER for all of variable support of $y = 23006 + .067x$. This shows a variable factor of .067 support personnel per training load supported. The Handbook^{5/} manpower percentages for personnel in support of all types of training are: officers 4.1%, enlisted 31.3%, and civilians 64.6%. The variable support factor by manpower type is therefore:

Officers per training load = .0028
 Enlisted per training load = .0210
 Civilians per training load = .0433

(2) Variable O&M Factors (Non-Personnel)

The Handbook^{5/} (pp. 26-29) developed a CER of $y = \$91,458,646 + \$619x$. This can be used to provide a variable O&M cost per training load = \$619.

3. Navy Cost and Manpower Factors

The Navy manpower factors were derived from FY1978 actual data received from the Chief of Navy Education and Training (CNET) through OP-120E and were used as MMTR backup. Navy O&M factors were significantly lower than other Services and not explainable. Therefore, we used the other Services average O&M costs.

a. Variable Mission Factors

The number of variable personnel for each category of training and the related training load were used to develop these factors. Similarly, the variable O&M costs were provided by CNET as total variable cost and related training load. All factors are derived by dividing the total variable manpower or cost by total training load.

(1) Recruit Training Manpower Factors

<u>TYPE</u>	<u>NUMBER</u>		<u>TRAINING LOAD</u>		<u>FACTOR</u>
Officer	52	+	14,560	=	.004
Enlisted	1472	+	14,560	=	.101
Civilian	29	+	14,560	=	.002

(2) Initial Skill Training Manpower Factors

• Apprentice Training Manpower Factors

<u>TYPE</u>	<u>NUMBER</u>		<u>TRAINING LOAD</u>		<u>FACTOR</u>
Officer	4	+	1,361	=	.002
Enlisted	191	+	1,361	=	.140
Civilian	3	+	1,361	=	.002

• "A" School Manpower Factors

<u>TYPE</u>	<u>NUMBER</u>		<u>TRAINING LOAD</u>		<u>FACTOR</u>
Officer	440	+	21,943	=	.020
Enlisted	4333	+	21,943	=	.197
Civilian	622	+	21,943	=	.028

(3) Advanced Initial Skill Training ("C" School)

<u>TYPE</u>	<u>NUMBER</u>		<u>TRAINING LOAD</u>		<u>FACTOR</u>
Officer	445	+	11,169	=	.040
Enlisted	5215	+	11,169	=	.467
Civilian	98	+	11,169	=	.009

(4) Variable O&M Factors (Non-personnel)

<u>TRAINING CATEGORY</u>	<u>TOTAL VARIABLE COST</u>		<u>TRAINING LOAD</u>		<u>COST FACTOR</u>
Recruit	\$223801	+	14560	=	\$ 15.37
Apprentice	\$138918	+	1361	=	\$102.07
"A" School	\$489794	+	21943	=	\$ 22.32
"C" School	\$209853	+	11169	=	\$ 18.79
Navy Average O&M				=	\$ 21.67
Other Service Average O&M				=	\$215.00

b. Variable Support Factors

Separate support manpower factors and cost factors were calculated for each category of training. All factors are derived by dividing the total variable manpower or cost by the total training load.

(1) Recruit Training Manpower Factors

<u>TYPE</u>	<u>NUMBER</u>		<u>TRAINING LOAD</u>		<u>FACTOR</u>
Officer	43	+	14560	=	.003
Enlisted	671	+	14560	=	.046
Civilian	911	+	14560	=	.063

(2) Initial Skill Training Manpower Factor

• Apprentice Training Manpower Factor

<u>TYPE</u>	<u>NUMBER</u>		<u>TRAINING LOAD</u>		<u>FACTOR</u>
Officer	4	+	1361	=	.002
Enlisted	51	+	1361	=	.037
Civilian	92	+	1361	=	.068

● "A" School Manpower Factors

<u>TYPE</u>	<u>NUMBER</u>		<u>TRAINING LOAD</u>		<u>FACTOR</u>
Officer	139	÷	21943	=	.006
Enlisted	1250	÷	21943	=	.057
Civilian	2219	÷	21943	=	.101

(3) Advanced Initial Skill Training ("C" School)

<u>TYPE</u>	<u>NUMBER</u>		<u>TRAINING LOAD</u>		<u>FACTOR</u>
Officer	79	÷	11169	=	.007
Enlisted	709	÷	11169	=	.063
Civilian	1141	÷	11169	=	.102

(4) Variable O&M Factors (Non-Personnel)

<u>TRAINING CATEGORY</u>	<u>TOTAL VARIABLE COST</u>		<u>TRAINING LOAD</u>		<u>COST FACTOR</u>
Recruit	\$1206437	÷	14560	=	\$ 82.86
Apprentice	\$ 90161	÷	1361	=	\$ 66.76
"A" School	\$2198345	÷	21943	=	\$100.18
"E" School	\$ 888534	÷	11169	=	\$ 79.55
Navy Average O&M				=	\$ 89.40
Other Service Average O&M				=	\$443.00

4. Marine Corps Cost and Manpower Factors

There is a lack of variable factors for manpower and costs for the Marine Corps. HQ USMC offices were quite helpful in providing whatever data was available so that MCR could develop factors. Mission manpower data was provided by MC-MPP-42 for FY1978, FY1979 and FY1980 for Recruit and Specialized Skill Training. MCR averaged the data for all three years since we were not sure of the accuracy or variability of the information. MCR was unable to get anything reasonable for variable base support manpower although we attempted to use total training base support manpower. We decided to use the Air Force factors for Base Support since they were derived

using the most demanding industrial engineering methodology. The variable O&M and procurement factors were developed using whatever cost data was available.

a. Variable Mission Factors

Mission manpower factors were developed from data received from HQ USMC. The instructor data was from MC-MPP-42 and the load data was from MC-OTTB. O&M cost data was obtained from MC-LPF and Ammunition procurement cost from MC-FDR.

(1) Recruit Training Manpower Factors

No officer or civilian instructors are used in recruit training. Officers and civilians in Mission Support of Recruit Training are not considered variable at current levels.

<u>FY</u>	<u>ENLISTED INSTRUCTORS</u> ^{7/}		<u>TRAINING LOAD</u> ^{8/}		<u>FACTORS</u>
78:	1,189	+	11,587	=	.1026
79:	1,127	+	11,161	=	.1010
80:	1,085	+	10,643	=	.1019

Average factor: enlisted per training load=.1018

(2) Initial Skill Training Manpower Factors

The instructor total was for all enlisted specialized training for active, reserve, male and female. However, it was for Marine Corps schools only which meant it could be used with workload rather than training load. (Workload is training load within USMC schools, training load includes training in other Services' schools). The Initial Skill Training also includes Advanced Initial Skill Training since no separate data was available.

^{7/} Instructors for all recruit training (USMC MC-MPP-42).

^{8/} FY1980 MMTR P.III-3.

<u>FY</u>	<u>OFFICER INSTRUCTORS</u> ^{9/}		<u>WORKLOAD</u> ^{10/}		<u>FACTORS</u>
78:	51	÷	5,374	=	.00949
79:	51	÷	6,873	=	.00742
80:	56	÷	7,222	=	.00775

Average factor: officers per workload = .00822

<u>FY</u>	<u>ENLISTED INSTRUCTORS</u> ^{9/}		<u>WORKLOAD</u> ^{10/}		<u>FACTORS</u>
78:	806	÷	5,374	=	.14998
79:	785	÷	6,873	=	.11422
80:	835	÷	7,222	=	.11562

Average factor: enlisted per workload = .12661

<u>FY</u>	<u>CIVILIAN INSTRUCTORS</u> ^{9/}		<u>WORKLOAD</u> ^{10/}		<u>FACTORS</u>
78:	26	÷	5,374	=	.00484
79:	26	÷	6,873	=	.00378
80:	26	÷	7,222	=	.00360

Average factor: civilians per workload = .00407

(3) Variable O&M Factors (Non-personnel)

- Recruit Training. The Marine Corps variable O&M cost per incoming recruit for Recruit Training is \$56.05 in FY78^{11/}. This includes uniform issue, ADP, ID card, administrative processing, training equipment, gym shoes, clothing accessories and expendables. The cost covers three areas: inprocessing, training variable O&M and outprocessing. It appears that about half of this cost is applicable to the processing function and half to training. For FY78 the variable cost per accession is \$28.05.
- Initial Skill Training. No Marine Corps variable O&M cost is available for Initial Skill Training. Therefore the average cost was computed for General Skill Training and used for Initial Skill variable O&M cost (non personnel). From the Jan. 1979 FYDP data (\$000):

^{9/} Instructors for enlisted specialized skill training in USMC schools (MC-NPP-42).

^{10/} FY1980 MMTR backup data (MC-OTTB).

^{11/} USMC: MC-LPF

PE84731	<u>FY78</u>
OMMC:	4778
(-) Civ MPR:	2962
Other O&M (Non-Personnel):	2816
÷ Workload:	6449
O&M Cost Per Workload =	\$ 437

(4) Variable Procurement Factor

Recruit Training procurement cost per training load is the cost of ammunition used in "boot camp." This figure of \$332.29 per training load was calculated by taking the total authorized ammunition for weapons firing per trainee and multiplying it by the number of trainees during FY78 (average load). No similar data is available for Initial Skill Training. Therefore, the Army cost of ammunition for Initial Skill Training was used as a most reasonable estimate (\$491 per training load). (USMC: MC-FDR).

b. Variable Support Factors

(1) Variable Manpower Factors

No Marine Corps variable manpower factors or variable manpower data was available. Therefore the Air Force Base Support manpower factors developed by their Management Engineering Agency were used.

Officer = .00425 per (training load + instructors)
 Enlisted = .04175 per (training load + instructors)
 Civilian = .0390 per (training load + instructors)

(2) Variable O&M Factors (Non-personnel)

- Recruit Training. The Marine Corps Recruit Training variable O&M base operating support cost is \$30.42 per trainee during FY78. The base operating support variable cost includes utilities, communications, printing, cleaning supplies, organizational equipment for training support, barracks furnishings, motor pools and various other items. (USMC: MC-FDR).

- Initial Skill Training. Support average O&M (non-personnel) was computed for PE85796M (Marine Corps training base operating support) from the Jan. 1979 FYDP data (\$000s):

PE85796M	<u>FY78</u>
OMMC:	41756
(-) Civ MPR:	31454
Other O&M (Non-personnel)	10302
+ Workload:	18802
O&M cost per Workload	\$ 548

5. Air Force Cost and Manpower Factors

The manpower factors are those developed by the Air Force Management Engineering Agency (AFMEA) by standard industrial engineering methods which include both engineered and statistical standards. The training and base support standards are developed by work sampling, time study on site, interviews and statistical analyses of historical workloads and empirical data. The standards are published in AF Manual 26-3, "Air Force Manpower Standards" and are used to provide an accurate, objective and consistent basis to forecast future manpower requirements based on projected workloads. The O&M variable factors are those used by the USAF Comptroller to price the FY1980 President's Budget. The Mission manpower driver for Air Force training is accessions rather than training load. In the case of Support the manpower driver is training load plus instructors. The Mission O&M manpower driver is accessions for Recruit Training and training load for Initial Skill Training. The Support O&M manpower driver is training load.

a. Variable Mission Factors

- Recruit Training. Recruit Training (contained in PE84711 "Recruit Training) Enlisted Instructors = .008065 per NPS Accession. No officer or civilian

instructors are used in Recruit Training. The basic unit is the flight which is commanded by a sergeant. The next level is squadron which is not a variable except for accession changes greater than 10,000 annually. The variable O&M factor of \$31 per accession consists of a \$26 field jacket and \$5 in miscellaneous supplies such as instructor hats, sewing uniforms and so forth.

- Initial Skill Training. Specialized Training - which includes Initial Skill Training (contained in FYDP: PE84731-General Skill Training, PE84733-Intelligence Training, PE84734-Cryptologic Training, PE86761-Health Care Training) Enlisted Instructors = .02896 per NPS Accession. No officer or civilian instructors are used in Initial Skill Training. The student squadron which administers the particular courses at each ATC base is not load related. The factor for variable O&M is \$155 per student load and is the cost of school supplies, books, printing and other direct costs. Advanced Initial Skill Training is incorporated in the Initial Skill Training factors.

b. Variable Support Factors

The Support factors are Training Real Property Maintenance (PE85794) and Base Operating Support Training (PE85796). They are combined into a single factor below. The personnel consist of all those performing the Support function on Air Training Command (ATC) bases which support training. The activities are listed below:

Supply Activity Operations
Maintenance of Material
Transportation Services
Laundry and Dry Cleaning Services
Food Service Program
Chaplain Activities
Recreation Activities
Finance Accounting Office
All Security Police

Community Service Activities
Bachelor Housing Operation and Furnishings
Operation of Utilities
Maintenance and Repair of Real Property
Minor Construction
Other Engineering Support
Headquarters Administration
Data Processing Activities
Bands

The Manpower factors for Training Support developed by AFMEA are:

Officers = .00425 per (Student load + Instructors)
Enlisted = .04175 per (Student load + Instructors)
Civilians = .0390 per (Student load + Instructors)

The variable Support O&M factor per training load is \$473 and consists of utilities, fuels, contract dining, cleaning, supplies, and related items.

C. ARMY MISSION/SUPPORT COSTS

The Army accepted 124,000 active NPS accessions in FY1978. These individuals were assigned either to Recruit Training or to One Station Unit Training (OSUT). Those who completed the Recruit Training Program of seven weeks were then assigned to an Initial Skill Training Program known as Advanced Individual Training (AIT). These courses are generally about eight weeks in length. The OSUT programs, which provide equivalent training are generally 12 weeks long, although the Armor Program in 1978 lasted 13 weeks.

Three factors distinguish Army Recruit and Initial Skill Training from that of the other Services. The first factor is the significantly larger number of Army NPS male accessions than those in the other Services. The second factor is the substantially larger number of installations used by the Army for this training as compared with other Services. The third factor is the shifting of training from the Recruit-AIT concept to OSUT and the accompanying disruption of staffing and support patterns.

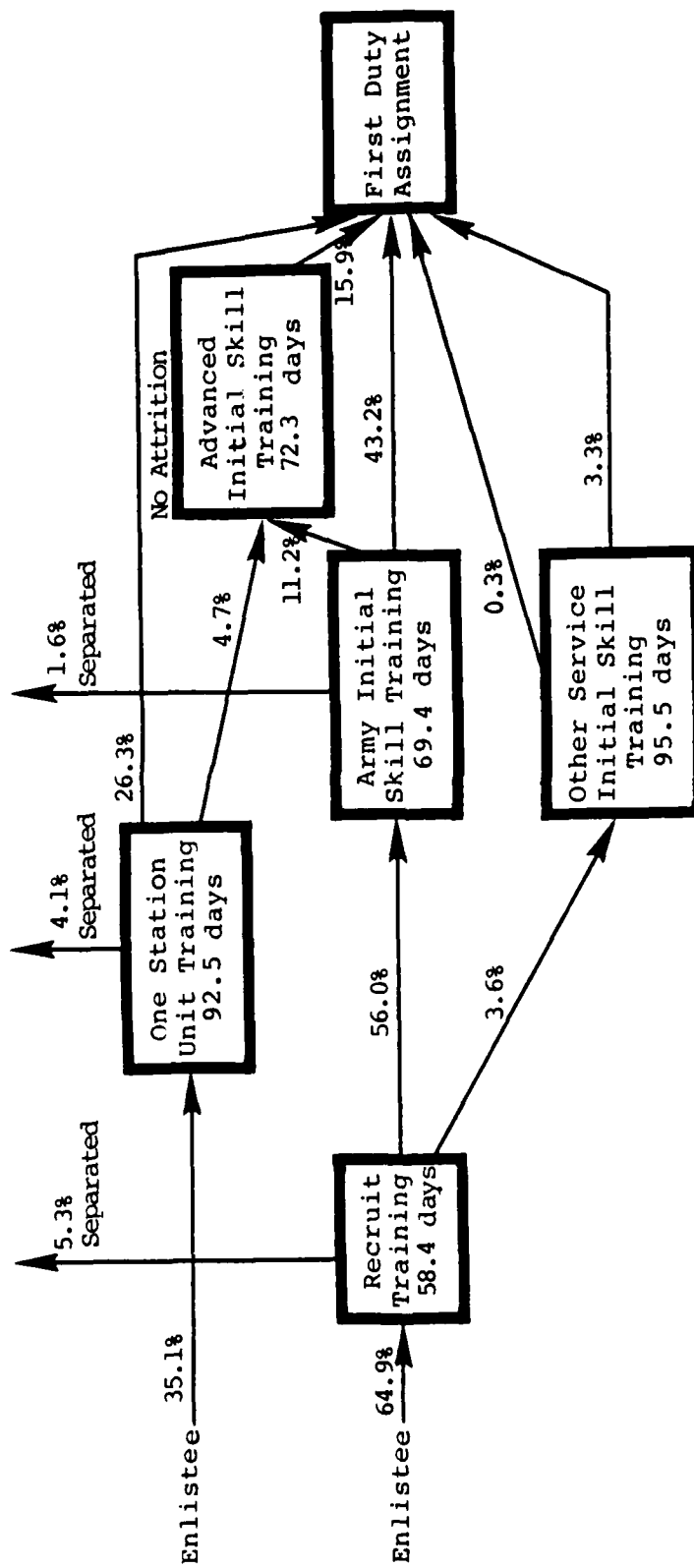
OSUT training increased from 1,483 active Army loads in 1976 to 9,252 in 1978. In round figures, this is an increase in trainees from 6,000 to 36,000 over a three-year period. During the same period, Army Recruit Training dropped from about 120,000 to 65,000 individuals. The impact on the training establishment at nine major installations must be assumed to be significant.^{12/}

Another significant aspect of Army training, similar to the Navy occurs following AIT or OSUT. This is the

^{12/} In fact, to the extent that the FY78 data reflects this turbulence and OSUT/Non OSUT mix continues to change, this estimate will be less useful for the future.

assignment of a large number of individuals to Advanced Initial Skill Training. In 1978 approximately 17,000 soldiers attended airborne training and other functional or professional development training as a follow-on to Initial Skill Training.

A schematic of the distribution during FY78 of Army male NPS accessions is shown in Figure II-4. Following that figure are two summary figures giving appropriation breakouts (Figures II-5 and II-6). Training Cost summaries and worksheets are then presented for each training category (Figures II-7 through II-14).



1/ SOURCE: Male NPS from FY1980 MMTR backup data and Army Staff (DCSOPS-TRI). Days for each training category include recycles and losses. Derived on the Training Cost Worksheets by dividing training load by average number of trainees. Note that total Army attrition for 0-6 months exceeds the total shown here (11.0% vice 12.4% shown on page II-71). The additional 1.4% represents non-training attrition.

Figure II-4. FY78 ARMY ACCESSION DISTRIBUTION^{1/}

Training Category	MP	O&M	Proc.	Total
Recruit	\$215	\$157	\$ 55	\$ 427
OSUT	187	152	137	476
Initial Skill	343	282	171	796
Advanced Initial Skill	<u>63</u>	<u>72</u>	<u>--</u>	<u>135</u>
TOTAL	\$808	\$663	\$363	\$1,834

1/ Excludes trainee pay and allowances.

Figure II-5. ARMY FY78 TRAINING COST SUMMARY BY APPROPRIATION^{1/}
(Per Active Male NPS Accession)

	VARIABLE COSTS (\$)					PER ACCESSION <u>1/</u>
	(000s) MIL. PERS	(000s) O&M	(000s) PROC	(000s) TOTAL		
1.0 Training Cost					<u>1,834</u>	
1.1 Mission Cost					<u>1,227</u>	
1.1.1 P&A Military	75,095.9			195,360.5	705	
1.1.2 P&B Civilian		6,372.6		6,372.6	60	
1.1.3 Other Mission		10,514.4	38,696.7	49,211.1	462	
1.2 Support Cost					<u>607</u>	
1.2.1 P&A Military	10,971.6			64,680.9	103	
1.2.2 P&B Civilian		28,813.0		10,971.6	270	
1.2.3 Other Support		24,896.3		28,813.0	234	
				24,896.3		

1/ Active male NPS.

2/ Excludes trainee pay and allowances.

Figure II-6. ARMY FY78 TRAINING COST SUMMARY BY WBS^{2/}

Service Army FY 78 Training Category Recruit

	VARIABLE COSTS (\$)					PER ACCESSION ^{1/}
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL		
1.0 Training Cost				45,471.5	427	
1.1 Mission Cost				28,076.4	264	
1.1.1 P&A Military	19,935.9			19,935.9	187	
1.1.2 P&B Civilian		536.9		536.9	5	
1.1.3 Other Mission		1,719.7	5,883.9	7,603.6	71	
1.2 Support Cost				17,395.1	163	
1.2.1 P&A Military	2,950.5			2,950.5	28	
1.2.2 P&B Civilian		7,745.5		7,745.5	72	
1.2.3 Other Support		6,695.1		6,695.1	63	

1/ Active male NPS.

2/ Excludes trainee pay and allowances

Figure II-7. RECRUIT TRAINING COST SUMMARY BY WBS^{2/}

	A \$ Total	B Manpower Driver (Training Load) 1/	Average Number Training 2/	Number Completing 1/ Training 2/	Number Starting Training 1/	Course Duration 3/	C		D
							Cost Factor	Manpower Factor	
1.0 Training Cost:	45,471,511		67,657	64,776	70,538	58.4 days 2/			
1.1 Mission Cost:	28,076,422								
1.1.1 P&A Military	19,935,857								
1.1.1.1 Officer	3,005,095	10,816					21,877	.0127	
1.1.1.2 Enlisted	16,930,762	10,816					10,073	.1554	
1.1.2 P&B Civilian	536,917	10,816					16,547	.0030	
1.1.3 Other Mission	7,603,648								
1.1.3.1 O&M	1,719,744	10,816					159		
1.1.3.2 Procurement	5,883,904	10,816					544		
1.2 Support Cost:	17,395,089								
1.2.1 P&A Military	2,950,482								
1.2.1.1 Officer	662,541	10,816					21,877	.0028	
1.2.1.2 Enlisted	2,287,941	10,816					10,073	.0210	
1.2.2 P&B Civilian	7,749,503	10,816					16,547	.0433	
1.2.3 Other Support	6,695,104	10,816					619		

1/ Active male NPS from FY1980 backup data (DCSOPS-TRI).

2/ (# completing + # starting) divided by 2.

3/ Training load divided by the average # training.

Figure II-8. TRAINING COST WORKSHEET

Service Army FY 78 Training Category OSUT

	(000s) MIL PERS	VARIABLE COSTS (\$)			PER ACCESSION ^{1/}
		(000s) OSM	(000s) PROC	(000s) TOTAL	
1.0 Training Cost				50,701.4	476
1.1 Mission Cost				36,061.2	339
1.1.1 P&A Military	17,446.6			17,446.6	164
1.1.2 P&B Civilian		964.0		964.0	9
1.1.3 Other Mission		3,040.4	14,610.3	17,650.7	166
1.2 Support Cost				14,640.1	137
1.2.1 P&A Military	2,483.2			2,483.2	23
1.2.2 P&B Civilian		6,522.2		6,522.2	61
1.2.3 Other Support		5,634.8		5,634.8	53

1/ Active male NPS.

2/ Excludes trainee pay and allowances.

Figure II-9. OSUT TRAINING COST SUMMARY BY WBS^{2/}

	A \$ Total	B Manpower Driver (Training Load) 1/	Average Number Training 2/	Number Completing Training 1/	Number Starting Training 1/	Course Duration 3/	C Cost Factor	D Manpower Factor
1.0 Training Cost:	50,701,414		35,935	33,692	38,177	92.5 days		
1.1 Mission Cost:	36,061,298							
1.1.1 P&A Military	17,446,566							
1.1.1.1 Officer	2,628,732	9,103					21,877	.0132
1.1.1.2 Enlisted	14,817,834	9,103					10,073	.1616
1.1.2 P&B Civilian	964,015	9,103					16,547	.0064
1.1.3 Other Mission	17,650,717							
1.1.3.1 O&M	3,040,402	9,103					334	
1.1.3.2 Procurement	14,610,315	9,103					1,605	
1.2 Support Cost:	14,640,116							
1.2.1 P&A Military	2,483,195							
1.2.1.1 Officer	557,610	9,103					21,877	.0028
1.2.1.2 Enlisted	1,925,585	9,103					10,073	.0210
1.2.2 P&B Civilian	6,522,164	9,103					16,547	.0433
1.2.3 Other Support	5,634,757	9,103					619	

1/ Active male NPS from TRADOC (DA,DCSOPS-TRI).

2/ (# completing + # starting) divided by 2.

3/ Training load divided by the average # training.

Figure II-10. TRAINING COST WORKSHEET

Service Army FY 78 Training Category Initial Skill

	VARIABLE COSTS (\$)					PER ACCESSION <u>1/</u>
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL		
1.0 Training Cost				84,826.5	796	
1.1 Mission Cost				57,235.0	537	
1.1.1 P&A Military	31,832.0			31,832.0	299	
1.1.2 P&B Civilian		3,065.9		3,065.9	29	
1.1.3 Other Mission		4,134.6	18,202.5	22,337.1	210	
1.2 Support Cost				27,591.5	259	
1.2.1 P&A Military	4,680.0			4,680.0	44	
1.2.2 P&B Civilian		12,292.0		12,292.0	115	
1.2.3 Other Support		10,619.6		10,619.6	100	

1/ Active male NPS.

2/ Excludes trainee pay and allowances.

Figure II-11. INITIAL SKILL TRAINING COST SUMMARY BY WBS 2/

Service Army

FY 78

Training Category

Initial Skill

	A \$ Total	B Manpower Driver (Training Load) 1/	Average Number Training 2/	Number Completing Training 1/	Number Starting Training 1/	Course Duration 3/	C Cost Factor	D Manpower Factor
1.0 Training Cost:	84,826,539		90,187	89,349	91,025	69.4		
1.1 Mission Cost:	57,234,996							
1.1.1 P&A Military	31,831,976							
1.1.1.1 Officer	4,804,119	17,156					21,877	.0128
1.1.1.1.2 Enlisted	27,027,857	17,156					10,073	.1564
1.1.2 P&B Civilian	3,065,908	17,156					16,547	.0108
1.1.3 Other Mission	22,337,112							
1.1.3.1 O&M	4,134,596	17,156					241	
1.1.3.2 Procurement	18,202,516	17,156					1,061	
1.2 Support Cost:	27,591,543							
1.2.1 P&A Military	4,679,961	17,156						
1.2.1.1 Officer	1,050,901	17,156					21,877	.0028
1.2.1.2 Enlisted	3,629,060	17,156					10,073	.0210
1.2.2 P&B Civilian	12,292,018	17,156					16,547	.0433
1.2.3 Other Support	10,619,564	17,156					619	

1/ Active male NPS from FY 1980 MMTR backup data (DA, DCSOPS-TRI).

2/ (# completing + # starting) divided by 2.

3/ Training load divided by the average # training.

Service Army FY 78 Training Category Advanced Initial Skill

	VARIABLE COSTS (\$)				
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL	PER ACCESSION <u>1/</u>
1.0 Training Cost				14,364.9	<u>135</u>
1.1 Mission Cost					
1.1.1 P&A Military	5,881.4			9,306.9	<u>87</u>
1.1.2 P&B Civilian		1,805.8		5,881.4	55
1.1.3 Other Mission		1,619.7		1,805.8	17
1.2 Support Cost				1,619.7	15
1.2.1 P&A Military				5,058.0	<u>48</u>
1.2.2 P&B Civilian	857.9			857.9	8
1.2.3 Other Support		2,253.3		2,253.3	21
		1,946.8		1,946.8	18

1/ Active male NPS.

2/ Excludes trainee pay and allowances.

Figure II-13. ADVANCED INITIAL SKILL TRAINING COST SUMMARY BY WBS 2/

Service Army

FY 78

Training Category Advanced Initial Skill

	A \$ Total	B Manpower Driver (Training Load) 1/	Average Number Training 2/	Number Completing Training 1/	Number Starting Training 1/	Course Duration 3/	C Cost Factor	D Manpower Factor
1.0 Training Cost:	14,364,888		15,882	14,828	16,936	72.3 days		
1.1 Mission Cost:	9,306,867							
1.1.1 P&A Military	5,881,393							
1.1.1.1 Officer	1,582,473	3,145					21,877	.0230
1.1.1.2 Enlisted	4,298,920	3,145					10,073	.1357
1.1.2 P&B Civilian	1,805,799	3,145					16,547	.0347
1.1.3 Other Mission	1,619,675							
1.1.3.1 O&M	1,619,675	3,145					515	
1.1.3.2 Procurement								
1.2 Support Cost:	5,058,021							
1.2.1 P&A Military	857,920	3,145						
1.2.1.1 Officer	192,649	3,145					21,877	.0028
1.2.1.2 Enlisted	665,271	3,145					10,073	.0210
1.2.2 P&B Civilian	2,253,346	3,145					16,547	.0433
1.2.3 Other Support	1,946,755	3,145					619	

1/ Active male NPS from FY1980 MMTR backup data (DA, DCSOPS-TRI).

2/ (# completing + # starting) divided by 2.

3/ Training load divided by the average # training.

Figure II-14. TRAINING COST WORKSHEET

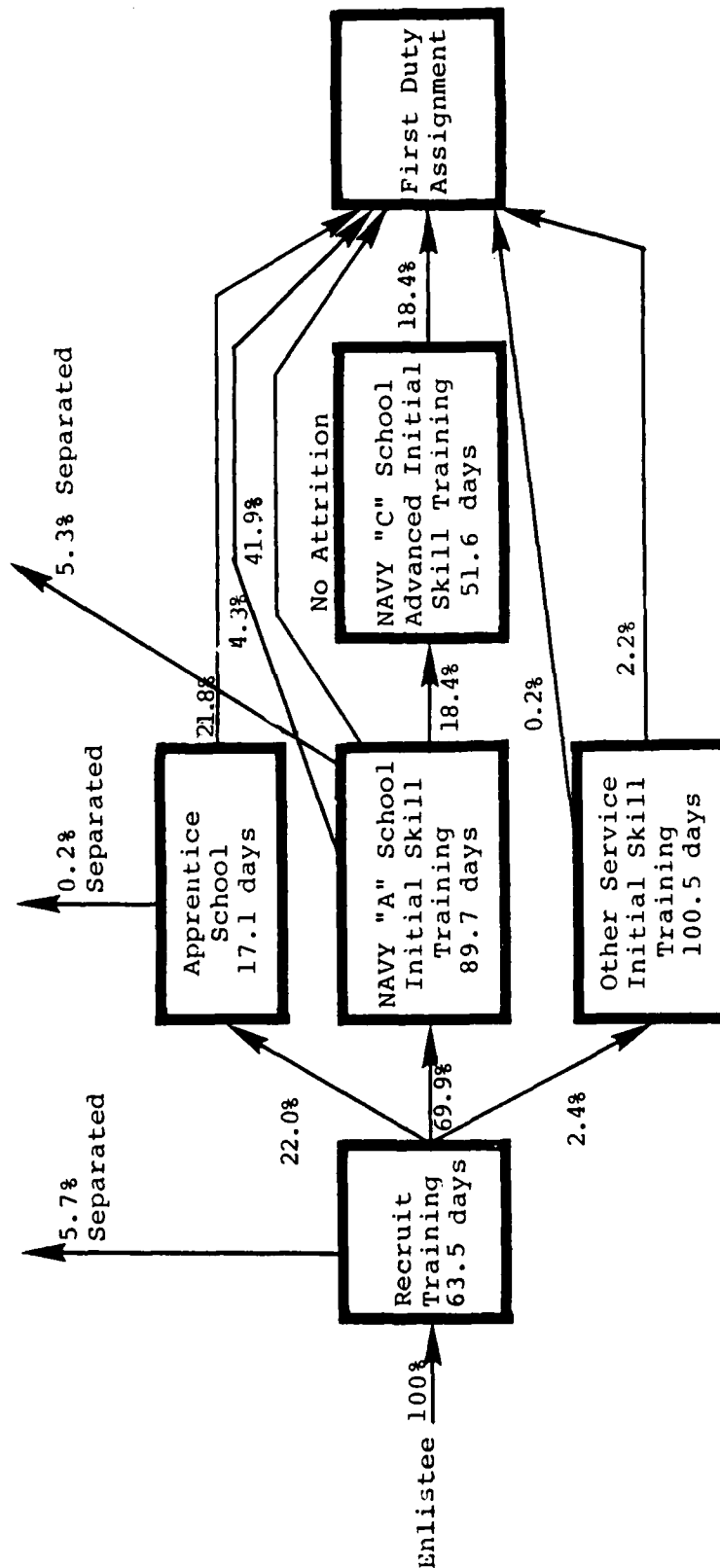
D. NAVY MISSION/SUPPORT COSTS

The Navy accepted 80,300 active NPS accessions in FY1978. These individuals were assigned to Recruit Training. They were trained at three installations, in contrast to the Air Force, which utilizes only one, and the Army, which utilized nine installations. Those who completed Recruit Training were assigned either to Apprentice Training, a relatively short course of seventeen days, or to "A" Schools which average ninety days in course duration. The Apprentice Training graduates are immediately assigned to duty with a little over ten weeks training. In contrast, minimum training before duty for an Army accession is twelve weeks and a significant number have fifteen weeks training.

In 1978, 48,810 Navy male NPS accessions completed the twenty-one week Recruit-"A" School cycle. About 70 percent were assigned to duty and 30 percent received additional training of approximately (average course duration) seven weeks, "C" School. This twenty-eight week cycle far exceeds in average numbers the training cycle for other Services.

An additional point of divergence between Army and Navy training is the type of Initial Skill Training offered. The Army provides Initial Skill Training at training centers. Advanced Initial Skill Training is provided by the school system. The Navy has colocated "A" Schools and "C" Schools and, in general, this arrangement might be considered as a single school system with basic and advanced programs.

A schematic of the distribution during FY78 of Navy male NPS accessions is shown on the next page (Figure II-15). Following that are two summary figures giving appropriation breakouts (Figures II-16 and II-17). Training Cost summaries and worksheets are presented next for each training category (Figures II-18 through II-25).



1/ Source: Male NPS from Navy OP-01 and Chief Navy Education and Training (CNET). Days for each training category include recycles and losses. Derived on the Training Cost Worksheets by dividing training load by average number of trainees. Note that Navy attrition for 0-6 months exceeds the total shown here (11.2% vice 12.2% shown on page II-71). The additional 1.0% represents non-training attrition.

Figure II-15. FY78 NAVY ACCESSION DISTRIBUTION^{1/}

Training Category	MP	O&M	Total
Recruit	\$290	\$319	\$ 609
Apprentice	20	19	39
"A" School	550	509	1,059
"C" School	<u>171</u>	<u>69</u>	<u>240</u>
TOTAL	\$1,031	\$916	\$1,947

1/ Excludes trainee pay and allowances.

Figure II-16. NAVY FY78 TRAINING COST SUMMARY
BY APPROPRIATION 1/
(Per Active Male NPS Accession)

	VARIABLE COSTS (\$)					PER ACCESSION <u>1/</u>
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL		
1.0 Training Cost				145,068.6	<u>1,947</u>	
1.1 Mission Cost				72,019.7	<u>967</u>	
1.1.1 P&A Military	58,630.3			58,630.3	787	
1.1.2 P&B Civilian		7,181.0		7,181.0	96	
1.1.3 Other Mission		6,208.4		6,208.4	83	
1.2 Support Cost				73,048.9	<u>981</u>	
1.2.1 P&A Military	18,178.2			18,178.2	244	
1.2.2 P&B Civilian		42,078.6		42,078.6	565	
1.2.3 Other Support		12,792.1		12,792.1	172	

1/ Active male NPS.

2/ Excludes trainee pay and allowances.

Figure II-17. NAVY FY78 TRAINING COST SUMMARY BY WBS^{2/}

Service	Navy	FY	78	Training Category	Recruit	
VARIABLE COSTS (\$)						
		(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL	PER ACCESSION ^{1/}
1.0 Training Cost					45,387.5	<u>609</u>
1.1 Mission Cost		14,624.3			17,920.9	<u>241</u>
1.1.1 P&A Military			463.6		14,624.3	196
1.1.2 P&B Civilian					463.6	6
1.1.3 Other Mission			2,833.1		2,833.1	38
1.2 Support Cost					27,466.6	<u>369</u>
1.2.1 P&A Military		7,026.1			7,026.1	94
1.2.2 P&B Civilian			14,603.2		14,603.2	196
1.2.3 Other Support			5,837.4		5,837.4	78

1/ Active male NPS.

2/ Excludes trainee pay and allowances.

Figure II-18. RECRUIT TRAINING COST SUMMARY BY WBS^{2/}

Service	Navy	FY	78	Training Category	Recruit			
	A \$ Total	B Manpower Driver (Training Load)1/ Load	Average Number Training2/ Training	Number Completing Training1/ Training	Number Starting Training1/ Training	Course Duration3/ Duration	C Cost Factor	D Manpower Factor
1.0 Training Cost:	45,387,533		75,707	73,729	77,685	63.5 days		
1.1 Mission Cost:	17,920,904							
1.1.1 P&A Military	14,624,256							
1.1.1.1 Officer	1,240,957	13,177					23,544	.004
1.1.1.2 Enlisted	13,383,299	13,177					10,056	.101
1.1.2 P&B Civilian	463,593	13,177					17,591	.002
1.1.3 Other Mission	2,833,055							
1.1.3.1 Civilian	2,833,055	13,177					215	
1.1.3.2 Procurement								
1.2 Support Cost:	27,466,629							
1.2.1 P&A Military	7,026,082							
1.2.1.1 Officer	930,718	13,177					23,544	.003
1.2.1.2 Enlisted	6,095,364	13,177					10,056	.046
1.2.2 P&B Civilian	14,603,186	13,177					17,591	.063
1.2.3 Other Support	5,837,411	13,177					443	

1/ Active male NPS from FY1980 MMTR backup data (OP-01 and CNET).

2/ (# completing + # starting) divided by 2.

3/ Training load divided by the average # training.

Figure II-19. TRAINING COST WORKSHEET

Service Navy FY 78 Training Category Apprentice

	VARIABLE COSTS (\$)				PER 1/ ACCESSION
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL	
1.0 Training Cost					
1.1 Mission Cost					
1.1.1 P&A Military	1,131.9			2,928.0	39.0
1.1.2 P&B Civilian				1,326.6	18.0
1.1.3 Other Mission		27.4		1,131.9	15.0
		167.3		27.4	0.4
1.2 Support Cost				167.3	2.0
1.2.1 P&A Military				1,601.4	21.0
1.2.2 P&B Civilian	326.1			326.1	4.0
1.2.3 Other Support		930.6		930.6	12.0
		344.7		344.7	5.0

1/ Active male NPS.

2/ Excludes trainee pay and allowances.

Figure II-20. APPRENTICE TRAINING COST SUMMARY BY WBS 2/

	A \$ Total	B Manpower Driver (Training Load) ^{1/}	Average Number 2/ Training	Number Completing Training ^{2/}	Number Starting Training ^{3/}	Course Duration ^{3/}	C Cost Factor	D Manpower Factor
1.0 Training Cost:	2,927,970		16,609	16,517	16,700	17.1 days		
1.1 Mission Cost:	1,326,576							
1.1.1 P&A Military	1,131,934							
1.1.1.1 Officer	36,634	778					23,544	.002
1.1.1.2 Enlisted	1,095,300	778					10,056	.140
1.1.2 P&B Civilian	27,372	778					17,591	.002
1.1.3 Other Mission	167,270							
1.1.3.1 O&M	167,270	778					215	
1.1.3.2 Procurement								
1.2 Support Cost:	1,601,394							
1.2.1 P&A Military	326,106							
1.2.1.1 Officer	36,634	778					23,544	.002
1.2.1.2 Enlisted	289,472	778					10,056	.037
1.2.2 P&B Civilian	930,634	778					17,591	.068
1.2.3 Other Support	344,654	778					443	

^{1/} Active male NPS estimate based on CNET data (OP-01).

^{2/} (# completing + # starting) divided by 2.

^{3/} Training load divided by the average # training.

Figure II-21. TRAINING COST WORKSHEET

Service Navy FY 78 Training Category "A" School

	VARIABLE COSTS (\$)					PER ACCESSION ^{1/}
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL		
1.0 Training Cost				78,893.9	<u>1,059</u>	
1.1 Mission Cost				40,905.5	<u>549</u>	
1.1.1 P&A Military	31,744.9			31,744.9	<u>426</u>	
1.1.2 P&B Civilian		6,377.5		6,377.5	<u>86</u>	
1.1.3 Other Mission		2,783.6		2,783.6	<u>37</u>	
1.2 Support Cost				37,988.4	<u>510</u>	
1.2.1 P&A Military	9,250.1			9,250.1	<u>124</u>	
1.2.2 P&B Civilian		23,002.8		23,002.8	<u>309</u>	
1.2.3 Other Support		5,735.5		5,735.5	<u>77</u>	

^{1/} Active male NPS.

^{2/} Excludes trainee pay and allowances

Figure II-22. "A" SCHOOL TRAINING COST SUMMARY BY WBS^{2/}

	A \$ Total	B Manpower Driver (Training Load)	Average Number Training ^{2/}	Number Completing Training ^{1/}	Number Starting Training ^{1/}	Course ^{3/} Duration	C Cost Factor	D Manpower Factor
1.0 Training Cost:	78,893,927		52,684	48,810	56,558	89.7 days		
1.1 Mission Cost:	40,905,526							
1.1.1 P&A Military	31,744,904							
1.1.1.1 Officer	6,096,483	12,947					23,544	.02
1.1.1.2 Enlisted	25,648,421	12,947					10,056	.197
1.1.2 P&B Civilian	6,377,019	12,947					17,591	.028
1.1.3 Other Mission	2,783,605							
1.1.3.1 OMM	2,783,605	12,947					215	
1.1.3.2 Procurement								
1.2 Support Cost:	37,988,401							
1.2.1 P&A Military	9,250,062							
1.2.1.1 Officer	1,828,945	12,947					23,544	.006
1.2.1.2 Enlisted	7,421,117	12,947					10,056	.057
1.2.2 P&B Civilian	23,002,818	12,947					17,591	.101
1.2.3 Other Support	5,735,521	12,947					443	

^{1/} Active male NPS estimate based on CNET data (OP-01).

^{2/} (# completing + # starting) divided by 2.

^{3/} Training load divided by the average # training.

Figure II-23. TRAINING COST WORKSHEET

Service Navy FY 78 Training Category "C" School

	VARIABLE COSTS (\$)					PER ACCESSION <u>1/</u>
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL		
1.0 Training Cost				17,858.6	240	
1.1 Mission Cost				18,866.3	159	
1.1.1 P&A Military	11,129.2			11,129.2	149	
1.1.2 P&B Civilian		312.5		312.5	4	
1.1.3 Other Mission		424.4		424.4	6	
1.2 Support Cost				5,992.3	80	
1.2.1 P&A Military	1,575.9			1,575.9	21	
1.2.2 P&B Civilian		3,541.9		3,541.9	48	
1.2.3 Other Support		874.5		874.5	12	

^{1/} Active male NPS.

^{2/} Excludes trainee pay and allowances.

Figure II-24. "C" SCHOOL TRAINING COST SUMMARY BY WBS^{2/}

Service Navy

FY

78

Training Category

"C" School

	A \$ Total	B Manpower Driver (Training Load) 1/	Average Number Training 2/	Number Completing 1/ Training	Number Starting 1/ Training	Course 3/ Duration	C Cost Factor	D Manpower Factor
1.0 Training Cost:	17,858,586		13,950	13,950	13,950	51.6 days		
1.1 Mission Cost:	11,866,270							
1.1.1 P&A Military	11,129,238							
1.1.1.1 Officer	1,859,034	1,974					23,544	.040
1.1.1.2 Enlisted	9,270,204	1,974					10,056	.467
1.1.2 P&B Civilian	312,522	1,974					17,591	.009
1.1.3 Other Mission	424,410							
1.1.3.1 OSM	424,410	1,974					215	
1.1.3.2 Procurement								
1.2 Support Cost:	5,992,310							
1.2.1 P&A Military	1,575,915							
1.2.1.1 Officer	325,331	1,974					23,544	.007
1.2.1.2 Enlisted	1,250,584	1,974					10,056	.063
1.2.2 P&B Civilian	3,541,913	1,974					17,591	.102
1.2.3 Other Support	874,482	1,974					443	

1/ Active male NPS estimate based on CNET data (OP-01).

2/ (# completing + # starting) divided by 2.

3/ Training load divided by the average # training.

Figure II-25. TRAINING COST WORKSHEET

E. MARINE CORPS MISSION/SUPPORT COSTS

The Marine Corps accepted 39,600 active NPS accessions in FY1978 and all went to Recruit Training. 30% of Marine enlistees go directly to units after Recruit Training. This is possible due to the length of training which is ten weeks. Another difference for the Marine Corps is the large number of trainees who attend Initial Skill Training at other Service schools, primarily the Army and Navy. The variable cost of enlisted initial entry training per Marine Corps NPS male accession was \$983 in FY1978 however that does not include \$177 per accession of training received from other Services.

No separate factors or data are kept by the Marine Corps for those Initial Skill courses taken after a first Initial Skill course. However, the training load information is taken into account in the computation of average length of Initial Skill training, inputs and outputs from it and other cost factors.

1. USMC Other Service Initial Skill Training

During FY1978 10,112 Marines went to other Services for enlisted Initial Skill Training. This is 25% of NPS Accessions and 28% of the output from Recruit Training. Approximately 240 were trained by the Air Force, 4,000 by the Army, and 5,900 by the Navy. The Marine Corps furnished 90 officers and 746 enlisted instructors to assist in the training; all other costs were borne by the other Services. Ten Air Force training loads, no Army, and an unknown number of Navy personnel were trained by the Marine Corps for initial skills.

A calculation of these costs for the Marine Corps follows. FY1978 reported workload outside the Marine Corps for enlisted IS training was 2,888: Army - 676, Air Force - 61,

Navy - 2,151 (estimated). Average IS cost per student man-year times manyears trained equals total cost:

Army - \$4,944.4 per manyear x 676 manyears = \$3,342,414
Navy - \$5,558.1 per manyear x 2151 manyears = \$11,955,487
USAF - \$3,310.7 per manyear x 61 manyears = \$201,953
USMC - \$3,670.0 per manyear x 10 manyears = \$36,700

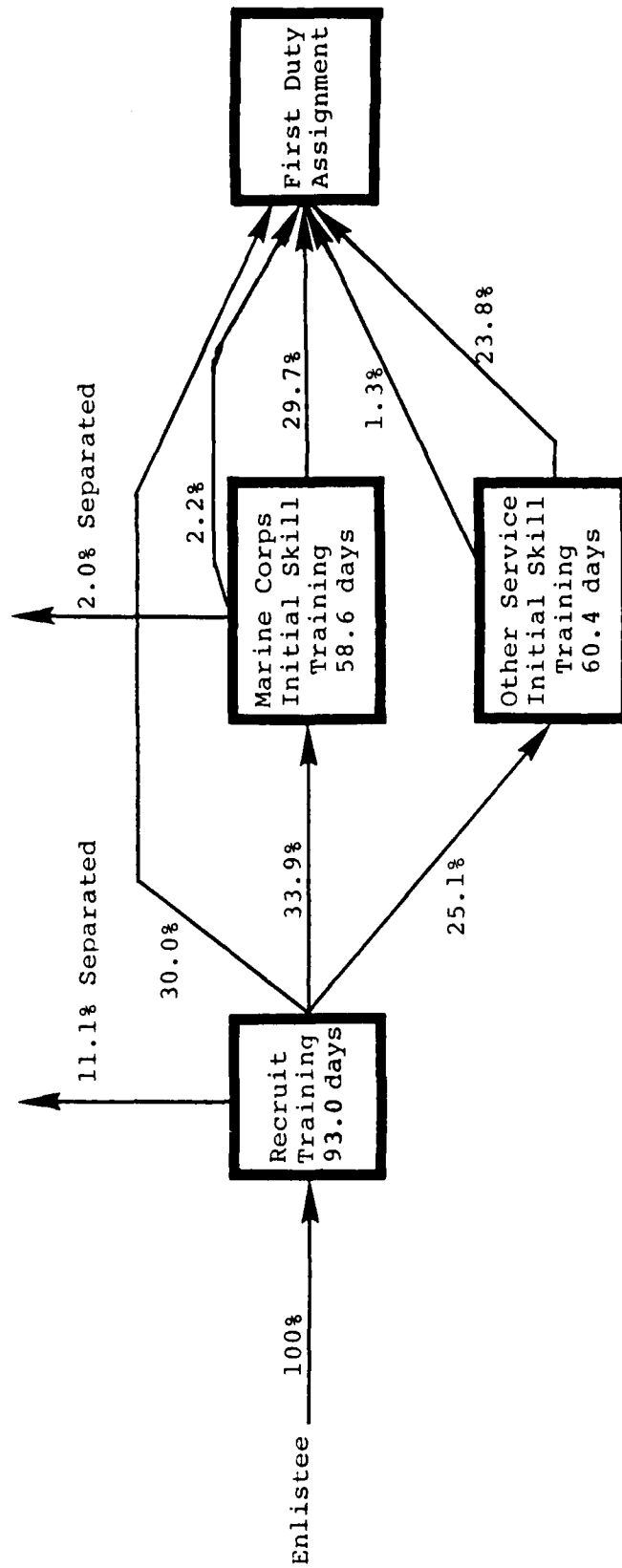
FY78 Cost of Marine Instructors furnished:

Officer 90 x \$20,741 = \$1,866,690
Enlisted 746 x \$8,841 = \$6,595,386
Total \$8,462,076

Cost of Other Service IS Training given USMC:

Army \$ 3,342,414
Navy \$11,955,487
USAF \$ 201,953
(-) USMC Instructor \$ 8,462,076
(-) USMC Training \$ 36,700
\$ 7,012,242 ÷ 39,600 NPS accessions =
\$177/accession

A schematic of the distribution during FY78 of Marine Corps male NPS accessions is shown in Figure II-26. Following that figure are two summary figures giving appropriation breakouts (Figures II-27 and II-28). Training Cost summaries and worksheets are then presented for each training category (Figures II-29 through II-32).



1/ Source: Male NPS from FY1980 MMTR backup data and Marine Corps staff (MPP-42 and MC OTTB). Days for each training category include recycles and losses. Derived on the Training Cost Worksheets by dividing training load by average number of trainees.

Figure II-26. FY78 MARINE CORPS ACCESSION DISTRIBUTION^{1/}

Training Category	MP	O&M	Proc	Total
Recruit	\$349	\$233	\$83	\$665
Initial Skill	159	157	42	358
TOTAL	\$508	\$390	\$125	\$1,024

1/ Excludes trainee pay and allowances.

Figure II-27. MARINE CORPS FY78 TRAINING COST SUMMARY
BY APPROPRIATION
(Per Active Male NPS Accession)

	VARIABLE COSTS (\$) 1/					PER ACCESSION 2/
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL		
1.0 Training Cost				38,188.7	<u>1,024</u>	
1.1 Mission Cost				19,825.7	<u>532</u>	
1.1.1 P&A Military	12,493.8			12,493.8	<u>335</u>	
1.1.2 P&B Civilian		213.8		213.8	<u>6</u>	
1.1.3 Other Mission		2,457.9	4,660.2	7,118.1	191	
1.2 Support Cost				18,363.0	<u>492</u>	
1.2.1 P&A Military	6,456.3			6,456.3	<u>173</u>	
1.2.2 P&B Civilian		9,011.4		9,011.4	242	
1.2.3 Other Support		2,895.3		2,895.3	77	

^{1/} Initial Skill Training costs reduced by attributable female percentage (5.8%).

^{2/} Active male NPS.

^{3/} Excludes trainee pay and allowances.

Figure II-28. MARINE CORPS FY78 TRAINING COST SUMMARY BY WBS ^{3/}

Service	USMC	FY	78	Training Category	Recruit	
VARIABLE COSTS (\$)						
		(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL	PER ACCESSION ^{1/}
1.0	Training Cost					
	1.1 Mission Cost					
	1.1.1 P&A Military	8,353.0			24,823.0	<u>665</u>
	1.1.2 P&B Civilian				12,484.5	<u>335</u>
	1.1.3 Other Mission				8,353.0	224
	1.2 Support Cost		1,047.5	3,084.0	4,131.5	111
	1.2.1 P&A Military				12,338.5	<u>330</u>
	1.2.2 P&B Civilian	4,676.0			4,676.0	<u>125</u>
	1.2.3 Other Support		6,526.6		6,526.6	175
			1,136.0		1,136.0	30

^{1/} Active male NPS.

^{2/} Excludes trainee pay and allowances

Figure II-29. RECRUIT TRAINING COST SUMMARY BY WBS^{2/}

	A \$ Total	B Manpower Driver	Average Number Training 1/	Number Completing Training 2/	Number Starting Training 2/	Course 3/ Duration	C Cost Factor	D Manpower Factor
1.0 Training Cost:	24,822,998		36,444	33,988	38,900	93.0 days		
1.1 Mission Cost:	12,484,482							
1.1.1 P&A Military	8,353,028							
1.1.1.1 Officer								
1.1.1.2 Enlisted	8,353,028	9,281 ^{4/}					8,841	.10180
1.1.2 P&B Civilian								none
1.1.3 Other Mission	4,131,454							
1.1.3.1 O&M	1,047,471	37,343 ^{5/}					28.05	
1.1.3.2 Procurement	3,083,983	9,281					332.29	
1.2 Support Cost:	12,338,516							
1.2.1 P&A Military	4,675,951							
1.2.1.1 Officer	901,414	10,226 ^{6/}					20,741	.00425
1.2.1.2 Enlisted	3,774,537	10,226 ^{6/}					8,841	.04175
1.2.2 P&B Civilian	6,526,591	10,226 ^{6/}					16,365	.03900
1.2.3 Other Support	1,135,974	37,343 ^{5/}					30.42	

1/ (# completing + # starting) divided by 2.

2/ Active male NPS from FY1980 MMTR backup data (MC-OTTB).

3/ Training load divided by the average # training.

4/ Training load is derived by including complete/partial recycle of approximately 25% with .4 completion. FY1980 MMTR backup data (MC-OTTB).

5/ Active male NPS accessions from OASD MRA&L.

6/ Instructors + training load (active NPS male) from FY1980 MMTR backup data (MC-OTTB).

Service USMC FY 78 Training Category Initial Skill (Marine Schools)

	VARIABLE COSTS (\$)					PER ACCESSION <u>1/</u>
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL		
1.0 Training Cost				14,180.7	<u>358</u>	
1.1 Mission Cost				7,785.4	<u>197</u>	
1.1.1 P&A Military	4,395.8			4,395.8	111	
1.1.2 P&B Civilian		227.0		227.0	6	
1.1.3 Other Mission		1,489.3	1,673.3	3,162.6	80	
1.2 Support Cost				6,395.3	<u>162</u>	
1.2.1 P&A Military	1,889.9			1,889.9	<u>48</u>	
1.2.2 P&B Civilian		2,637.8		2,637.8	67	
1.2.3 Other Support		1,867.6		1,867.6	47	

1/ Total active NPS (male and female).

2/ Excludes trainee pay and allowances.

Figure II-31. INITIAL SKILL TRAINING COST SUMMARY BY WBS^{2/}

	A \$ Total	B Manpower Driver	Average Number Training	Number Completing Training	Number Starting Training	Course Duration	C Cost Factor	D Manpower Factor
1.0 Training Cost:	14,180,731		21,200	19,791	22,609	58.6 days ^{3/}		
1.1 Mission Cost:	7,785,424							
1.1.1 P&A Military	4,395,808							
1.1.1.1 Officer	581,033	3,408 ^{4/}					20,741	.00822
1.1.1.2 Enlisted	3,914,774	3,408 ^{4/}					8,841	.12661
1.1.2 P&B Civilian	226,992	3,408 ^{4/}					16,365	.00407
1.1.3 Other Mission	3,162,624							
1.1.3.1 O&M	1,489,296	3,408 ^{4/}					437	
1.1.3.2 Procurement	1,673,328	3,408 ^{4/}					491	
1.2 Support Cost:	6,395,307							
1.2.1 P&A Military	1,889,898							
1.2.1.1 Officer	364,360	4,133 ^{5/}					20,741	.00425
1.2.1.2 Enlisted	1,525,538	4,133 ^{5/}					8,841	.04175
1.2.2 P&B Civilian	2,637,825	4,133 ^{5/}					16,365	.03900
1.2.3 Other Support	1,867,584	3,408 ^{4/}					548	

1/ (# completing + # starting) divided by 2.

2/ Active NPS (male and female) from FY1980 MMTR backup data (MC-OTTB).

3/ Workload divided by the average # training.

4/ Total active workload. FY1980 MMTR backup data (MC-OTTB).

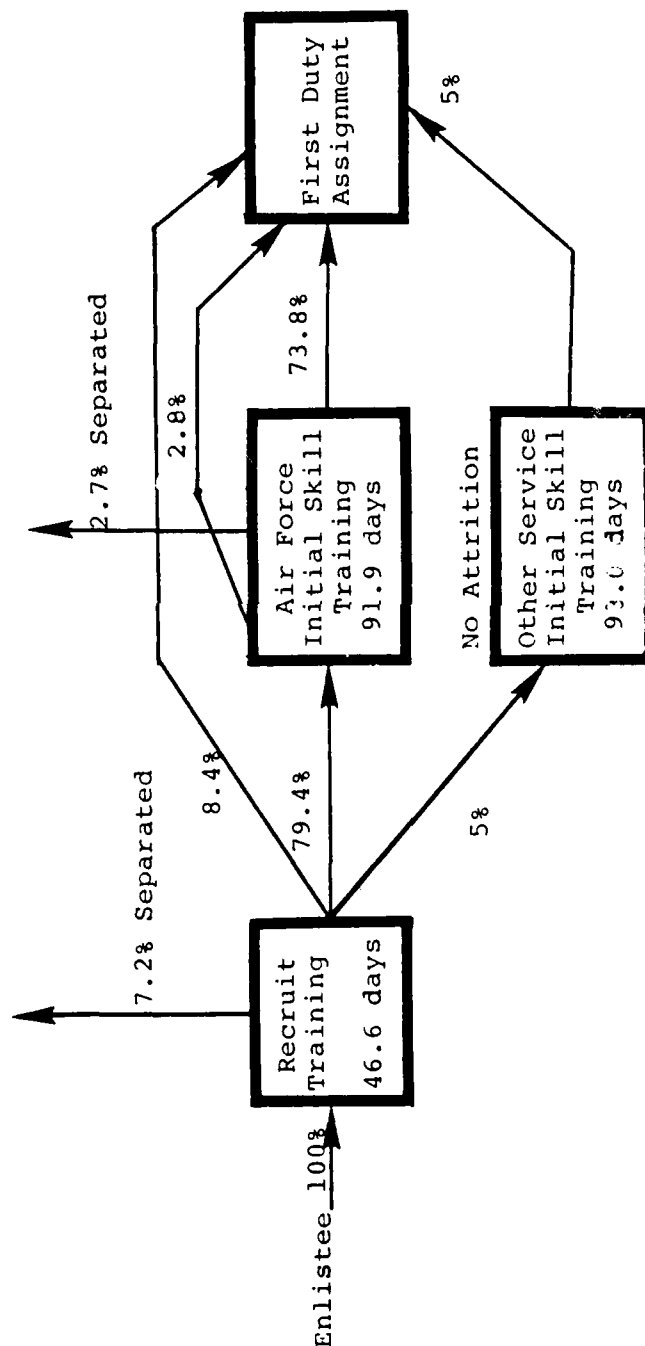
5/ Workload + instructors. Workload is total Active NPS Enlisted (male and female) from FY1980 MMTR backup data (MC-OTTB).

Figure II-32. TRAINING COST WORKSHEET

F. AIR FORCE MISSION/SUPPORT COSTS

The Air Force accepted 68,000 active NPS accessions in FY1978 and all went to Recruit Training. Recruit Training is fairly short (six weeks) followed by a more extensive period of Initial Skill Training for most airmen. Approximately 1% of accessions go to Advanced Initial Skill Training (654 during FY78) which is not shown since it is incorporated in the average length of Initial Skill Training. Other Service Initial Skill Training was not costed because the Air Force trains approximately the same number of other Service personnel as AF personnel are trained by the other Services. The variable cost of enlisted initial training per NPS male accession is \$1,097 for FY1978.

A schematic of the distribution during FY78 of Air Force male NPS accessions is shown on the next page (Figure II-33). Two summary figures follow showing the appropriation break-outs (Figures II-34 and II-35). Training Cost summaries and worksheets are presented next for each training category (Figures II-36 through II-39).



1/ Source: Male NPC from FY1980 MMTR backup data and Air Staff (MPP/TP-ST). Days for each training category include recycles and losses. Derived on the Training Cost Worksheets by dividing training load by average number of trainees.

Figure II-33. FY78 AIR FORCE ACCESSION DISTRIBUTION^{1/}

Training Category	MP	O&M	Total
Recruit	\$154	\$180	\$ 334
Initial Skill	<u>440</u>	<u>323</u>	<u>763</u>
TOTAL	\$594	\$503	\$1,097

1/ Excludes trainee pay and allowances.

Figure II-34. AIR FORCE FY78 TRAINING COST SUMMARY
BY APPROPRIATION^{1/}
(Per Active Male NPS Accession)

	VARIABLE COSTS (\$) ^{1/}				PER ACCESSION ^{2/}
	(000s) MIL PEPS	(000s) O&M	(000s) PROC	(000s) TOTAL	
1.0 Training Cost				60,628.4	1,097
1.1 Mission Cost				24,931.1	452
1.1.1 P&A Military	21,241.9			21,241.9	385
1.1.2 P&B Civilian					--
1.1.3 Other Mission		3,689.2		3,689.2	67
1.2 Support Cost				35,697.3	645
1.2.1 P&A Military	11,581.8			11,581.8	209
1.2.2 P&B Civilian		14,869.6		14,869.6	269
1.2.3 Other Support		9,245.9		9,245.9	167

^{1/} Initial Skill Training costs reduced by attributable female percentage (18.7%).

^{2/} Active male NPS.

^{3/} Excludes trainee pay and allowances.

Figure II-35. AIR FORCE FY78 TRAINING COST SUMMARY BY WBS ^{3/}

Service Air Force FY 78 Training Category Recruit

	VARIABLE COSTS (\$)				PER ACCESSION <u>1/</u>
	(000s) MIL. PERS	(000s) O&M	(000s) PROC	(000s) TOTAL	
1.0 Training Cost				18,445.0	<u>334</u>
1.1 Mission Cost				6,342.4	<u>115</u>
1.1.1 P&A Military	4,628.1			4,628.1	84
1.1.2 P&B Civilian					
1.1.3 Other Mission		1,714.3		1,714.3	31
1.2 Support Cost				12,102.6	<u>219</u>
1.2.1 P&A Military	3,889.8			3,889.8	70
1.2.2 P&B Civilian		4,993.6		4,993.8	90
1.2.3 Other Support		3,219.2		3,219.2	58

^{1/} Active male NPS.

^{2/} Excludes trainee pay and allowances.

Figure II-36. RECRUIT TRAINING COST SUMMARY BY WBS^{2/}

	A \$ Total	B Manpower Driver	Average Number Training ^{1/}	Number Completing ^{2/} Training	Number Starting Training ^{2/}	Course Duration ^{3/}	C Cost Factor	D Manpower Factor
1.0 Training Cost:	18,445,022		53,309	51,318	55,300	46.6 days		
1.1 Mission Cost:	6,342,385							
1.1.1 P&A Military	4,628,085							
1.1.1.1 Officer								
1.1.1.2 Enlisted	4,628,085	55,300 ^{4/}					10,377	.008065
1.1.2 P&B Civilian								
1.1.3 Other Mission	1,714,300							
1.1.3.1 O&M	1,714,300	55,300 ^{4/}					31	
1.1.3.2 Procurement								
1.2 Support Cost:	12,102,637							
1.2.1 P&A Military	3,889,788							
1.2.1.1 Officer	747,933	7,252 ^{5/}					24,267	.004250
1.2.1.2 Enlisted	3,141,855	7,252 ^{5/}					10,377	.004175
1.2.2 P&B Civilian	4,993,611	7,252 ^{5/}					17,656	.039000
1.2.3 Other Support	3,219,238	6,806 ^{5/}					473	

1/ (# completing + # starting) divided by 2.

2/ Active male NPS from FY1980 MMTR backup data (AF-MPP/TP-ST).

3/ Training load (6806) divided by the average # training.

4/ Active male NPS accessions from OASD MRA&L-ATR.

5/ Training load + instructors (AF-MPP/TP-ST).

6/ FY1980 MMTR backup data, active male NPS training load (AF-MPP/TP-ST).

Figure II-37. TRAINING COST WORKSHEET

Service Air Force FY 78 Training Category Initial Skill

	VARIABLE COSTS (\$)				PER ACCESSION ^{1/}
	(000s) MIL PERS	(000s) O&M	(000s) PROC	(000s) TOTAL	
1.0 Training Cost					
1.1 Mission Cost					
1.1.1 P&A Military				51,885.8	<u>763</u>
1.1.2 P&B Civilian				22,864.4	<u>336</u>
1.1.3 Other Mission	20,435.2			20,435.2	301
1.2 Support Cost		2,429.2		2,429.2	36
1.2.1 P&A Military				29,021.4	<u>427</u>
1.2.2 P&B Civilian	9,461.2			9,461.2	139
1.2.3 Other Support		12,147.3		12,147.3	179
		7,412.9		7,412.9	109

^{1/} Total active NPS (male and female).

^{2/} Excludes trainee pay and allowances.

Figure II-38. INITIAL SKILL TRAINING COST SUMMARY BY WBS^{2/}

	A S Total	B Manpower Driver	Average Number Training 1/	Number Completing Training 2/	Number Starting Training 2/	Course 3/ Duration	C Cost Factor	D Manpower Factor
1.0 Training Cost:	51,885,726		62,228	62,046	62,410	91.9 days		
1.1 Mission Cost:	22,864,378							
1.1.1 P&A Military	20,435,218							
1.1.1.1 Officer								
1.1.1.2 Enlisted	20,435,218	68,000 ^{4/}					10,377	.02896
1.1.2 P&B Civilian								
1.1.3 Other Mission	2,429,160							
1.1.3.1 OEM	2,429,160	15,672 ^{5/}					155	
1.1.3.2 Procurement								
1.2 Support Cost:	29,021,348							
1.2.1 P&A Military	9,461,182							
1.2.1.1 Officer	1,819,400	17,641 ^{6/}					24,267	.00425
1.2.1.2 Enlisted	7,642,782	17,641 ^{6/}					10,377	.04175
1.2.2 P&B Civilian	12,147,310	17,641 ^{6/}					17,656	.03900
1.2.3 Other Support	7,412,856						473	

- 1/ (# completing + # starting) divided by 2.
2/ Active NPS (male and female) from FY1980 MMTR backup data (AF-MPP/TP-ST).
3/ Training load (15,672) divided by the average # training.
4/ Total accessions (Active), both male and female enlisted (OASD MRA&L-ATR).
5/ Training load from FY1980 MMTR (P.V-4).
6/ Training load + instructors. Training load is total Active NPS Enlisted (male and female) from FY1980 MMTR (AF-MPP/TP-ST).

Figure II-39. TRAINING COST WORKSHEET

G. TRAINEE PAY AND ALLOWANCES (ALL SERVICES)

The pay and allowances for a new Service person must be included as a Training cost for the period during which the accession process takes place. We have included this cost as WBS element 1.3 in the summary. Pay and allowances are defined as base pay, government contribution to Social Security (FICA), and basic allowance for subsistence (BAS).

An adjusted six month period was used even though the cost per accession can be determined by multiplying the average accession pipeline period (after adjustment for attrition) by the pay and allowances for that time period. We have determined the average length of the accession pipeline period by Service as shown below:^{13/}

Army	144 days
Navy	165 days
USMC	158 days
USAF	142 days

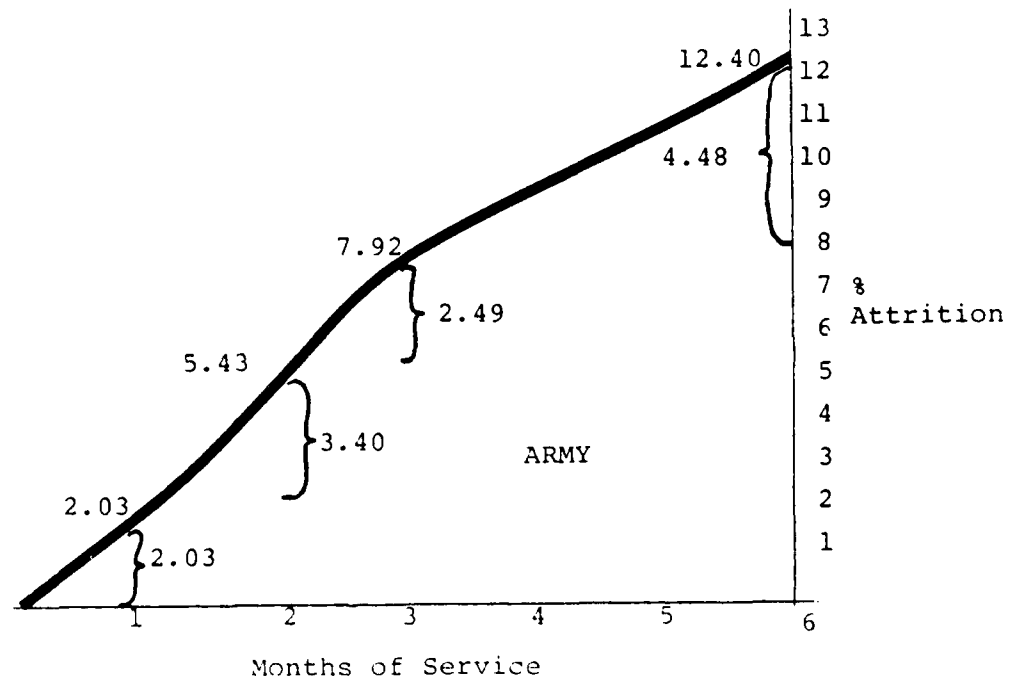
The above figures are based on average lengths of training to include recycling and some of the waiting time. The travel and leave time included was taken from Service transient data. However, it does not include leave taken without travel which occurs when the follow-on school is located at the same base as the prior school. Also, it does not include non-school related waiting time at reception stations and the AFEES. This unaccounted for time could add as much as 10 to 15 days for each of the average periods. Therefore, the use of a six month average period for calculating pay and allowance cost is desirable to account for any lost time.

The adjustment of the average six month accession period

^{13/} Calculations are on P.IV-5.

was accomplished using attrition data reported by each Service by cohort on a quarterly basis.

The calculation changes the six month period to a lesser number of expected man-months per Male NPS accession. The manner in which attrition per month is deducted is shown below in an example using the Army data. The other Services were similarly calculated. The attrition factors used are listed in Figure II-40.



The area under the line is attrition and is deducted from the total six month period (using trapezoids):

$$6 \text{ months} - \left[1 \left(\frac{2.03}{2} \right) + 1 \left(\frac{2.03 + 5.43}{2} \right) + 1 \left(\frac{5.43 + 7.92}{2} \right) + 3 \left(\frac{7.92 + 12.4}{2} \right) \right] \\ \div 100 = 5.5810 \text{ months}$$

	0-29 days	30-59 days	60-89 days	90-179 days	TOTAL (0-6 mos)	7-36 mos. (FY75 cohort)
Army ^{1/}	2.03	3.40	2.49	4.48	12.40	22.3
Navy	3.32 ^{2/}	3.32 ^{2/}	3.32 ^{2/}	2.25	12.22	23.4
USMC	1.2	5.9	4.0	2.0	13.1	23.2
USAF	2.47 ^{2/}	2.47 ^{2/}	2.47 ^{2/}	2.5	9.9	21.3

^{1/} Adjusted for 6 month period

^{2/} Unable to provide 30 day increments, distributed 90 days equally.

Source: OSD MRA&L MPP-A&R and Service staffs.

Figure II-40. NPS MALE PERCENTAGE ATTRITION FACTORS
(FY78 1st 90 days-FY77-2nd 90 days)

The pay and allowance cost is calculated using the E-1 rate since six months is the normal promotion point to E-2. Although a number of trainees are promoted to E-2 prior to that time, particularly in the USMC (21%), the use of the six month average accession period compensates for any added amount of E-2s as they make only 9.3% more than E-1s on an annual basis.

Trainee pay cost is shown below:

TRAINEE YEARLY PAY COST (\$)			
	<u>FY78</u>	<u>FY79</u>	<u>FY80</u>
Basic Pay (E-1) ^{1/}	\$4770	\$5033	\$5033
BAS ^{1/}	1037	1095	1098
FICA (E-1) ^{2/}	<u>298</u>	<u>307</u>	<u>309</u>
Total Cost	6105	6435	6440
÷ 2 (for 6 mos):	3053	3218	3220

The application of the expected man months to the pay cost provides the resulting costs per accession.

PAY AND ALLOWANCE COST/ACCESSION				
	<u>EXPECTED MAN/MONTHS</u>	<u>FY78</u>	<u>FY79</u>	<u>FY80</u>
Army	5.5810	\$2839	\$2992	\$2994
Navy	5.5176	2807	2959	2961
USMC	5.4985	2797	2949	2951
USAF	5.6295	2864	3019	3021

^{1/} Military Pay Tables

^{2/} CY77-5.85%, CY78-6.05%, CY79-6.13%, CY80-6.13% (Projected)

III. NON-TRAINING ACCESSION COSTS

A. INTRODUCTION

1. Definition

The non-training costs are defined as those individual or other costs not related to training. So as to provide a time-phased accession cost that includes all first term attrition costs, we have identified the total cost per accession who attrites where appropriate. These include attrition costs incurred after arrival at first assignment (assuming attrition prior to completion of first enlistment). The non-DoD cost for Veterans Benefits^{1/} is included for informational purposes but not as an accession pipeline cost.

2. Methodology

Cost areas and methodology are separately discussed in the following order by Work Breakdown Structure entry:

- 2.1 Recruiting/Advertising
- 2.2 Examining
- 2.3 Personnel Processing
 - 2.3.1 Processing In
 - 2.3.2 Clothing Issue
 - 2.3.3 Processing Out
 - 2.3.4 Separation Payment
- 2.4 Permanent Change of Station
 - 2.4.1 Accession PCS
 - 2.4.2 Separation PCS
- 2.5 Disciplinary
 - 2.5.1 Administrative
 - 2.5.2 Prisoner
 - 2.5.3 Deserter
- 2.6 Medical
- 2.7 Enlistment Bonus
- Veterans Benefits (Non-WBS entry)

^{1/} Developed in GAO Study FPCD-79-28, "High Cost of Enlisted Attrition Can Be Reduced," February 18, 1979.

3. Result

A summary of the Non-Training Accession costs by appropriation and Service is provided for the Work Breakdown Structure (WBS) elements of Non-Training (WBS #2.0) on the following figures. First, Figure III-1 is presented which summarizes costs by Service and provides the DoD average. Then the accession costs are shown (Figures III-2 through III-5) by appropriation for each Service by WBS element. The individual sections following these figures explain the costs more fully.

In order to provide the greatest possible flexibility in the use of the methodology and cost data which have been developed, we have included first term attrition costs for selected WBS elements. These are: Processing Out, Separation Payment, Separation PCS, and Disciplinary. All other costs are entry costs which are not affected by attrition. The cost per accession and the cost per accession who attrites are approximately the same.

	Variable Cost (\$) Per Accession				
	Army	Navy	USMC	USAF	DoD (Ave)
2.0 Non-Training (Other)	<u>4,661</u>	<u>3,611</u>	<u>4,041</u>	<u>2,752</u>	<u>3,903</u>
2.1 Recruiting/ Advertising ^{1/2/}	<u>2,391</u>	<u>1,906</u>	<u>2,053</u>	<u>1,203</u>	<u>1,973</u>
2.2 Examining ^{2/3/}	<u>149</u>	<u>149</u>	<u>149</u>	<u>149</u>	<u>149</u>
2.3 Personnel Processing	<u>783</u>	<u>752</u>	<u>702</u>	<u>690</u>	<u>746</u>
2.3.1 Processing In	88	86	86	60	82
2.3.2 Clothing Issue	396	375	363	380	383
2.3.3 Processing Out	83	86	86	60	82
2.3.4 Separation Pay- ment	211	205	167	190	199
2.4 Permanent Change of Station	<u>434</u>	<u>468</u>	<u>389</u>	<u>413</u>	<u>433</u>
2.4.1 Accession PCS	330	340	267	295	317
2.4.2 Separation PCS	104	128	122	118	116
2.5 Disciplinary ^{2/}	<u>216</u>	<u>163</u>	<u>285</u>	<u>45</u>	<u>173</u>
2.5.1 Administrative	17	24	30	12	24
2.5.2 Prisoner	152	118	181	32	125
2.5.3 Deserter	47	21	74	1	24
2.6 Medical ^{2/}	<u>238</u>	<u>173</u>	<u>173</u>	<u>252</u>	<u>214</u>
2.7 Enlistment Bonus ^{1/}	<u>450</u>	<u>N/A</u>	<u>290</u>	<u>N/A</u>	<u>215</u>

^{1/} Applies only to Male High School Diploma Graduate (MHSDG).

^{2/} Average Cost used as variable cost.

^{3/} Shared Cost by all Services (Army O&M Cost).

Figure III-1. ALL SERVICE FY78 NON-TRAINING COST
SUMMARY BY WBS
(Per Active Male NPS Accession)

Service Army FY 78

	Variable Cost (\$)/ Accession		
	MP	O&M	Total
2.0 Non-Training (Other)	<u>3,178</u>	<u>1,483</u>	<u>4,661</u>
2.1 Recruiting/Advertising ^{1/2/}	<u>1,159</u>	<u>1,232</u>	<u>2,391</u>
2.2 Examining ^{2/3/}	<u>66</u>	<u>83</u>	<u>149</u>
2.3 Personnel Processing	<u>723</u>	<u>60</u>	<u>783</u>
2.3.1 Processing In	58	30	88
2.3.2 Clothing Issue	396		396
2.3.3 Processing Out	58	30	88
2.3.4 Separation Payment	211		211
2.4 Permanent Change of Station	<u>434</u>		<u>434</u>
2.4.1 Accession PCS	330		330
2.4.2 Separation PCS	104		104
2.5 Disciplinary	<u>216</u>		<u>16</u>
2.5.1 Administrative	17		17
2.5.2 Prisoner ^{4/}	152		152
2.5.3 Deserter	47		47
2.6 Medical ^{2/}	<u>130</u>	<u>108</u>	<u>238</u>
2.7 Enlistment Bonus ^{1/}	<u>450</u>		<u>450</u>

^{1/} Applies only to Male High School Diploma Graduate (MHS DG).

^{2/} Average Cost used as variable cost.

^{3/} Shared Cost by all Services (Army O&M Cost).

^{4/} Cost of attrition after arrival at first duty assignment.

Figure III-2. NON-TRAINING PER ACCESSION COSTS
(Army)

Service Navy FY 78

	Variable Cost (\$)/ Accession		
	MP	O&M	Total
2.0 Non-Training (Other)	<u>2,411</u>	<u>1,200</u>	<u>3,611</u>
2.1 Recruiting/Advertising ^{1/2/}	<u>936</u>	<u>970</u>	<u>1,906</u>
2.2 Examining ^{2/3/}	<u>66</u>	<u>83</u>	<u>149</u>
2.3 Personnel Processing	<u>696</u>	<u>56</u>	<u>752</u>
2.3.1 Processing In	<u>58</u>	<u>28</u>	<u>86</u>
2.3.2 Clothing Issue	<u>375</u>		<u>375</u>
2.3.3 Processing Out	<u>58</u>	<u>28</u>	<u>86</u>
2.3.4 Separation Payment	<u>205</u>		<u>205</u>
2.4 Permanent Change of Station	<u>468</u>		<u>468</u>
2.4.1 Accession PCS	<u>340</u>		<u>340</u>
2.4.2 Separation PCS	<u>128</u>		<u>128</u>
2.5 Disciplinary	<u>163</u>		<u>163</u>
2.5.1 Administrative	<u>24</u>		<u>24</u>
2.5.2 Prisoner ^{4/}	<u>118</u>		<u>118</u>
2.5.3 Deserter	<u>21</u>		<u>21</u>
2.6 Medical ^{2/}	<u>82</u>	<u>91</u>	<u>173</u>
2.7 Enlistment Bonus ^{1/}			N/A

^{1/} Applies only to Male High School Diploma Graduate (MHSDG).

^{2/} Average Cost used as variable cost.

^{3/} Shared Cost by all Services (Army O&M Cost).

^{4/} Cost of attrition after arrival at first duty assignment.

Figure III-3. NON-TRAINING PER ACCESSION COSTS
(Navy)

Service Marine Corps FY 78

	Variable Cost (\$)/ Accession		
	MP	O&M	Total
2.0 Non-Training (Other)	<u>2,789</u>	<u>1,252</u>	<u>4,041</u>
2.1 Recruiting/Advertising ^{1/2/}	<u>1,031</u>	<u>1,022</u>	<u>2,053</u>
2.2 Examining ^{2/3/}	<u>66</u>	<u>83</u>	<u>149</u>
2.3 Personnel Processing	<u>646</u>	<u>56</u>	<u>702</u>
2.3.1 Processing In	<u>58</u>	<u>28</u>	<u>86</u>
2.3.2 Clothing Issue	<u>363</u>		<u>363</u>
2.3.3 Processing Out	<u>58</u>	<u>28</u>	<u>86</u>
2.3.4 Separation Payment	<u>167</u>		<u>167</u>
2.4 Permanent Change of Station	<u>389</u>		<u>389</u>
2.4.1 Accession PCS	<u>267</u>		<u>267</u>
2.4.2 Separation PCS	<u>122</u>		<u>122</u>
2.5 Disciplinary	<u>285</u>		<u>285</u>
2.5.1 Administrative	<u>30</u>		<u>30</u>
2.5.2 Prisoner ^{4/}	<u>181</u>		<u>181</u>
2.5.3 Deserter	<u>74</u>		<u>74</u>
2.6 Medical ^{2/}	<u>82</u>	<u>91</u>	<u>173</u>
2.7 Enlistment Bonus ^{1/}	<u>290</u>		<u>290</u>

^{1/} Applies only to Male High School Diploma Graduate (MHSDG).

^{2/} Average Cost used as variable cost.

^{3/} Shared Cost by all Services (Army O&M Cost).

^{4/} Cost of attrition after arrival at first duty assignment.

Figure III-4. NON-TRAINING PER ACCESSION COSTS
(Marine Corps)

Service Air Force FY 78

	Variable Cost (\$)/ Accession		
	MP	O&M	Total
2.0 Non-Training (Other)	<u>2,014</u>	<u>738</u>	<u>2,752</u>
2.1 Recruiting/Advertising ^{1/2/}	<u>745</u>	<u>458</u>	<u>1,203</u>
2.2 Examining ^{2/3/}	<u>66</u>	<u>83</u>	<u>149</u>
2.3 Personnel Processing	<u>662</u>	<u>28</u>	<u>690</u>
2.3.1 Processing In	<u>46</u>	<u>14</u>	<u>60</u>
2.3.2 Clothing Issue	<u>380</u>		<u>380</u>
2.3.3 Processing Out	<u>46</u>	<u>14</u>	<u>60</u>
2.3.4 Separation Payment	<u>190</u>		<u>190</u>
2.4 Permanent Change of Station	<u>413</u>		<u>413</u>
2.4.1 Accession PCS	<u>295</u>		<u>295</u>
2.4.2 Separation PCS	<u>118</u>		<u>118</u>
2.5 Disciplinary	<u>45</u>		<u>45</u>
2.5.1 Administrative	<u>12</u>		<u>12</u>
2.5.2 Prisoner ^{4/}	<u>32</u>		<u>32</u>
2.5.3 Deserter	<u>1</u>		<u>1</u>
2.6 Medical ^{2/}	<u>83</u>	<u>169</u>	<u>252</u>
2.7 Enlistment Bonus ^{1/}			N/A

^{1/} Applies only to Male High School Diploma Graduate (MHSDG).

^{2/} Average Cost used as variable cost.

^{3/} Shared Cost by all Services (Army O&M Cost).

^{4/} Cost of attrition after arrival at first duty assignment.

Figure III-5. NON-TRAINING PER ACCESSION COSTS
(Air Force)

F/G 15/5

MANAGEMENT CONSULTING AND RESEARCH INC FILES CHOR
MARGINAL PIPELINE COSTS OF ENLISTED PERSONNEL. (U)

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B. RECRUITING/ADVERTISING (2.1)

1. Definition

Recruiting and Advertising costs were not initially intended for inclusion as they occur prior to enlistment and are not directly a part of the accession process. However, in order to provide a complete cost per accession and for comparison with other efforts in this area, the average cost is included for informational purposes. This average cost is incurred by recruiters, recruiting support, and advertising as contained in the FYDP Program Elements 81711 (Recruiting) and 81712 (Advertising). Since we are concerned only with the cost of enlisted accessions, that portion devoted to recruiting of officers and medical officers has been deducted.^{1/} Since the thrust of the recruiting and advertising effort is to obtain male high school diploma graduates (MHSDG) the cost of recruiting non-high school graduates and females is assumed as zero.

2. Methodology

No attempt was made to redevelop existing cost estimates of Recruiting and Advertising. Average cost was calculated by adding the FY80 President's Budget costs as contained in the FYDP and dividing by total number of recruited male high school diploma graduates (MHSDG). A sample calculation is shown for Army FY78 average cost per MHSDG. The other Services and years were similarly derived.

^{1/} Numbers provided by OASD MRA&L MPP-A&R.

EXAMPLE: RECRUITING AND ADVERTISING COST PER FY78 ARMY
MHSDG RECRUIT

	<u>O&M^{1/}</u> <u>(\$M)</u>	<u>MP^{1/}</u> <u>(\$M)</u>	<u>NPS MHSDG</u> <u>Accessions</u> <u>(000)^{2/}</u>	<u>Average</u> <u>Cost Per</u> <u>Accession</u> <u>(MHSDG)</u>
Total PE 81711A (Recruiting)	\$53.3	\$88.3		
Total PE 81712A (Advertising)	<u>41.1</u>	<u> </u>		
Subtotal	\$99.4	\$88.3		
Officer/Medical ^{2/}	<u>-7.5</u>	<u>-1.8</u>		
TOTAL	\$91.9	\$86.5	÷ 74.6	= \$2,391

3. Result

Average costs per NPS male high school diploma graduates for recruiting and advertising:

	<u>FY78</u> <u>(O&M)</u>	<u>FY78</u>	<u>FY79</u>	<u>FY80</u>
Army	(\$1,232)	\$2,391	\$2,243	\$2,358
Navy	(970)	1,906	1,866	1,879
USMC	(1,022)	2,053	1,931	2,103
USAF	(458)	1,203	1,341	1,390

1/ January 1979 FYDP.

2/ Numbers provided by OASD MRA&L MPP-A&R.

C. EXAMINING (2.2)

1. Definition

The cost of examining is taken from the FY80 President's Budget as contained in the FYDP Program Element 81713 (Examining). This includes costs of Physical (Medical) and Mental Examining to determine qualification for induction.

2. Methodology

Since the testing is accomplished on a consolidated basis at the Armed Force Entrance and Examining Stations (AFEES) the Army, as executive agent for DoD, bears the Operations and Maintenance cost. All Services contribute military manpower for staffing. To derive the average cost, the Army O&M cost and the four Services' Military Personnel costs are added together and the total is divided by the sum of all DoD NPS accessions for each fiscal year. The medical review board is excluded. This is an average cost which is assumed to be the variable cost and is distributed per accession. The calculation and result is shown below.

3. Result

Examining costs are shown below:

Total DoD Examining Costs^{1/}
(PE 81713) (\$000)

	Army O&M \$	Army, Navy, USMC & USAF MP \$ ^{3/}	Total Examining Costs	DoD Accessions ^{2/} (000)	Average Cost Per Acces- sion ^{3/}	
					O&M	Total
FY78	\$27,582	\$21,876	\$49,458	331.7	\$83	\$149
FY79	31,800	22,470	54,270	372.6	85	146
FY80	35,066	21,549	56,615	378.5	93	150

^{1/} January 1979 FYDP.

^{2/} OASD MRA&L MPP-A&R.

^{3/} Since all Services share equally in examining accessions no separate MP Service costs are provided.

D. PERSONNEL PROCESSING (2.3)

Personnel processing costs are divided into four categories: processing in, clothing issue, processing out, and separation payment. Each of these is discussed further in the following pages.

D. 1 PROCESSING IN (2.3.1)

a. Definition

The cost of Processing In is associated with those administrative activities required to process recruits upon their arrival for training at Army Reception Centers, the Air Force Personnel Processing Group, Navy Recruit Training Centers and Marine Corps Recruit Depots.

b. Methodology

Total costs were obtained from the FYDP Program Elements 81714A (Army Personnel Processing) and 81714F (Air Force Personnel Processing) which contain all costs of Army Reception Centers and the Air Force Personnel Processing Group. No comparable cost breakdown exists for the Marine Corps or Navy.

We were provided the Marine Corps variable O&M costs associated with recruit personnel processing in, issuing of uniforms and ID cards, and other associated activities as \$28 per accessions for FY78 and FY79, and \$30 for FY80; also we were provided the Army variable O&M cost of \$30 for all years per accession.^{1/} The Army Military Personnel cost was derived by using the FYDP cost for PE 81714A and dividing by total inputs to initial entry training as shown below:

Army Average Military Personnel Cost

	<u>MP (\$000)^{2/}</u>	<u>BCT/OSUT^{3/}</u> <u>Input (000)</u>	<u>Average MP Cost</u> <u>Per Accession</u>
FY78	\$9,209	158.1	\$58
FY79	8,156	192.4	42
FY80	7,743	195.2	40

^{1/} The Army variable cost is from the TRADOC Cost Factor Handbook updated in April 1978 and used to cost the FY80 Budget. The Marine Corps variable O&M cost was provided by ODCS I&L (O&MMC section).

^{2/} Source: Jan 1979 FYDP.

^{3/} Includes Reserve Components.

Similarly Air Force average cost per accession was calculated for Military Personnel and O&M. The Air Force cost was derived as follows:^{1/}

FY78	PE81714F	OMAF	\$1,084,000
	(Personnel Processing)	MPAF	<u>3,665,000</u>
TOTAL			\$4,749,000

Total input Recruit Training was 73,969 + 5,265
separates = 79,234 divided into total cost gives \$60 cost
of processing in or out (\$14 OMAF and \$46 MPAF). The same
cost for FY79 and FY80 is \$59 (\$15 OMAF and \$44 MPAF).

	<u>AIR FORCE COSTS</u>		
	<u>MP</u>	<u>O&M</u>	<u>Total</u>
FY78	\$46	\$14	\$60
FY79	44	15	59
FY80	44	15	59

The Army MP cost is used for the Navy and Marines. The Marine
O&M cost is used for the Navy.

c. Result

Processing in costs per accession are shown below:

	<u>FY78</u>			<u>FY79</u>			<u>FY80</u>		
	<u>MP</u>	<u>O&M</u>	<u>Total</u>	<u>MP</u>	<u>O&M</u>	<u>Total</u>	<u>MP</u>	<u>O&M</u>	<u>Total</u>
Army	\$58	\$30	\$88	\$42	\$30	\$72	\$40	\$30	\$70
Navy	58	28	86	42	28	70	40	30	70
USMC	58	28	86	42	28	70	40	30	70
USAF	46	14	60	44	15	59	44	15	59

^{1/} Source: Jan 1979 FYDP.

D. 2 CLOTHING ISSUE (2.3.2)

a. Definition

The initial issue of enlisted clothing is made during Recruit Training. Experience shows negligible recovery of any attrition clothing due to tailoring, sewing on of insignia, wear and tear, etc. This is a Military Personnel Appropriation cost.

b. Methodology

The cost of the initial clothing issue is taken from the FY80 President's Budget. Only the initial issue clothing cost is included. The clothing maintenance allowance begins after the sixth month of service is completed and is not included. It is assumed that each male accession has the same cost for initial clothing issue within a Service.

c. Result

Variable male clothing issue costs per accession are shown below.^{1/}:

	<u>FY78</u>	<u>FY79</u>	<u>FY80</u>
Army	\$396	\$404	\$504
Navy	375	380	344
USMC	363	418	443
USAF	380	373	348

^{1/} FY80 President's Budget justification books, OASD COMP PB-MP.

D. 3 PROCESSING OUT (2.3.3)

a. Definition

The cost of processing out those accessions who are separated from the service prior to arrival at first duty station is essentially the reverse of processing in: turn in clothing, close out personnel records, issue final pay and terminal leave payment, issue travel pay or ticket and discharge papers. The Air Force Personnel Processing Group at Lackland AFB has both the processing in and out function so the cost should be approximately the same. However, the Army processing out is accomplished at transfer points for which no cost is available. The Navy and Marine Corps personnel sections perform the processing out function as well as processing in, therefore, the costs should be the same. This is considered to be a first term attrition cost.

b. Methodology

The Army, Navy, Marine Corps, and Air Force processing in costs have been used as the processing out costs since no better data is available.

c. Result

Processing out costs per accession who attrites are shown below:

	<u>FY78</u>			<u>FY79</u>			<u>FY80</u>		
	<u>MP</u>	<u>O&M</u>	<u>Total</u>	<u>MP</u>	<u>O&M</u>	<u>Total</u>	<u>MP</u>	<u>O&M</u>	<u>Total</u>
Army	\$58	\$30	\$88	\$42	\$30	\$72	\$40	\$30	\$70
Navy	58	28	86	42	28	70	40	30	70
USMC	58	28	86	42	28	70	40	30	70
USAF	46	14	60	44	15	59	44	11	59

D. 4 SEPARATION PAYMENT (Terminal Leave) (2.3.4)

a. Definition

A separation payment is made to each enlisted separatee which includes unused leave accrued at the rate of 2.5 days per month. The average payment for unused leave days to enlisted separatees found in the FY80 President's Budget for appropriate pay grade was used for this cost. The separation payment is in the Military Personnel Appropriation. This is a first term attrition cost.

b. Methodology

The average E-1 separation payment was used for the accession pipeline process period (0-6 months) and the average E-2 payment for the period after arrival at first duty station (7-36 months). The weighted average of E-1 (6 months) and E-2 (30 months) is the per accession cost of attrition.^{1/}

^{1/} FY80 President's Budget backup information (OASD COMP PB-MP).

c. Result

The separation payment per accession who attrites
is shown below:

	<u>Ave. E-1 Separation Payment^{1/}</u>	<u>Ave. E-2 Separation Payment^{1/}</u>	<u>Total Ave. 0-36 Months^{1/}</u>
Army FY78	\$119	\$230	\$211
FY79	124	241	221
FY80	110	214	197
Navy FY78	124	221	205
FY79	131	232	215
FY80	131	232	215
USMC FY78	119	177	167
FY79	126	187	177
FY80	126	187	177
USAF FY78	112	206	190
FY79	116	212	196
FY80	116	212	196

^{1/} (E-1 rate)1/6 + (E-2 rate)5/6 = Ave. 0-36 month rate.

E. PERMANENT CHANGE OF STATION (2.4)

Permanent Change of Station (PCS) costs attributable to the accession process are: Accession PCS and Separation PCS. These costs normally include all travel costs incurred during the course of making a change of station. Each of these is discussed further in the following pages.

E. 1 ACCESSION PCS (2.4.1)

a. Definition

Accession PCS cost for first term enlistees is the total cost for transportation, movement of personal baggage or household goods and junior enlisted travel for families to overseas locations. It is important to note that where a school of over twenty weeks is attended the accession move ends upon arrival at that school and a new move is started upon departure (training move). All costs are carried in the Military Personnel Appropriation.

b. Methodology

The average cost per accession move is calculated in the FY80 President's Budget by dividing the total cost by the number of accessions during the fiscal year to arrive at an average cost per accession move. The additional cost for training moves has been added for the Marine Corps and Air Force. No comparable Army and Navy data were found.

c. Result

The enlisted accession PCS cost per accession is shown below^{1/};

^{1/} FY80 President's Budget backup data. OASD COMP PB-MP.

	<u>FY78</u>	<u>FY79</u> ^{1/}	<u>FY80</u> ^{1/}
Army	\$330	\$453	\$465
Navy	340	391	394
USMC	267	314	325
USAF	295	408	411

^{1/} The Marine Corps for FY79 and FY80 projected 3,383 accessions each year would go to schools over 20 weeks long. The mileage cost added to accessions cost would be \$115 per move (both years use same rate) which increases the pipeline move cost by \$8 and \$9 for each accession. The Air Force estimated 7,568 and 8,416 tech school graduates and eliminees for FY79 and FY80 (of which approximately 48% are IS) which provides an increase based on a training move rate of \$133 and \$136 to pipeline cost by \$15 and \$16 for each accession. Army and Navy - none added for training moves.

E. 2 SEPARATION PCS (2.4.2)

a. Definition

Separation PCS cost is the amount paid for travel home for enlisted separatees upon release from military service. All costs are carried in the Military Personnel Appropriation. This is a first term attrition cost.

b. Methodology

The FY80 President's Budget costs for separation travel were used. The rates are for transportation only so as to separate out the other separation costs for enlisted personnel completing service after normal tours (household goods, etc.). The same rate has been used for all three years.

c. Result

The separation PCS costs are the same for FY78, FY79 and FY80:

Army	\$104
Navy	128
USMC	122
USAF	118

F. DISCIPLINARY (2.5)

Disciplinary costs are divided into three categories: Administrative, Prisoners, and Deserters.

Administrative Costs are those generated by judicial and non-judicial actions, such as Court Martials, which can result in punishments and are governed by the Uniform Code of Military Justice (UCMJ), as well as boards which are governed by departmental regulations and which can result in discharge of Service persons.

Prisoner costs are those associated with the administration of military prisons or other places of confinement separately funded.

Deserter costs are those accrued in the apprehension and processing of returned deserters exclusive of judicial or prisoner costs.

Each of the categories and the applicable costing methodology is discussed further in the following pages. All are considered to be first term attrition costs.

F. 1 ADMINISTRATIVE (2.5.1)

a. Definition

Administrative costs are those associated with the costs of court martials and boards of officers that occur prior to discharge of separatees. Many separatees are discharged without either of the above where a type of expeditious discharge program is in effect and the individual agrees to the discharge. All costs are in the Military Personnel Appropriation.

b. Methodology

The cost of each court martial is an average rate of \$152 based on an Army study performed in June 1977^{1/} that used \$151 each and a Navy study in September 1975 that used \$153.^{2/} The total cost was derived by multiplying FY77 enlisted court martial rates for each service times the end strength times the court martial average cost. MCR then attributed this cost on a per accession basis. No cost for nonjudicial punishment is indicated. The average rate of \$152 has been used for each Service. It was assumed all persons receiving a court martial will attrite. The same cost is used for all years.

^{1/} Dept. of the Army "Cost Effective Alternatives to Personnel Control Facilities," June 1977.

^{2/} Chief of Naval Operations (OP-964D) "Analysis of Proposals for the Timely Release of Individuals who are Unsited by Choice and/or Performance for Naval Service," September 1975.

Average Cost Of Court Martials Per Accession

	<u>FY77 Rate 1000^{1/}</u>	<u>Enlisted End/ Strength^{1/} (000's)</u>	<u>Court Martial Average Cost</u>	<u>Total Cost (000's)</u>	<u>Cost Accession^{2/}</u>
Army	10	680	\$152	\$1034	\$ 6
Navy	19	462	152	1334	13
USMC	32	173	152	841	19
USAF	2	470	152	143	2

The cost of Military boards of officers was calculated as \$325 each and a rate of 15% of those who separate.^{3/} The assumption was made that boards would not occur during the accession pipeline process where expeditious discharges are the norm.

Average Cost Of Boards Per Accession

	<u>Male Cohort Attrition Rate^{4/}</u>	<u>Cost NPS Male Accession^{5/}</u>
Army	22.3%	\$11
Navy	23.4%	11
USMC	23.2%	11
USAF	21.3%	10

All administrative costs are assumed as Military Personnel Appropriation costs.

1/ AVF Data Book (OASD MRA&L RRA-MPA).

2/ $\text{Cost/Accession} = \frac{\text{Court Martial Rate} \times \text{End Strength} \times \text{Cost per Court Martial}}{\text{Total Accessions}}$

3/ Chief of Naval Operations (OP-964D). op cit.

4/ FY75 cohort attrition for 7-36 months (OASD MRA&L MPP-A&R).

5/ Male attrition rate times 15% times \$325. Example: Army-.223 x .15 x \$325 = \$11.

c. Result

The total administrative cost per accession who attrites is shown below (add court martial and board costs) for FY78, FY79, and FY80:

Army	\$17
Navy	24
USMC	30
USAF	12

F. 2 PRISONER (2.5.2)

a. Definition

Prisoner costs are those associated with the operation of military correctional facilities.

b. Methodology

The average cost per prisoner is calculated at \$29 per day based on the FY78 cost for the US Disciplinary Barracks (USDB) at Ft. Leavenworth, Kansas.^{1/} This rate has been used for all three years.

There are few imprisonments occurring during the accession period due to the ease of discharge of trainees; therefore, no prisoner costs should be attributed to that period. However, this cost can be attributed for the period after arrival at first duty assignment as an attrition cost on a per accession basis. The costs were calculated as if all prisoners were first term enlistees.

c. Result

The enlisted accession prisoner cost for the period after arrival at first duty assignment to end of first tour is shown below:

^{1/} Data from DA DCSPER - Law Enforcement Section. This cost is the pro rata share of operating the USDB FOR FY78 (rations, clothing, guards, pay, etc.).

	Ave. Enlisted Prisoner Man- years ^{1/}	(000\$) Cost/Year	Cost/NPS ^{2/} Accession
Army	1791.8	18,966	\$ 152
Navy	895.2	9,476	118
USMC	677.9	7,176	181
USAF	207.8	2,200	32

^{1/} Data from Service Law Enforcement sections. This is the average number of prisoners throughout FY78.

^{2/} Ave. prisoner manyears x 365 x cost/day = cost/year ÷ NPS Accessions = Cost/Accession. Assumes all prisoners are first term enlistees.

F. 3 DESERTER (2.5.3)

a. Definition

Desertion is generally defined to be an unauthorized absence of 30 or more days. The costs associated with desertion that have been used are those connected with apprehension and processing.

b. Methodology

During FY78 the Department of Defense had 30,891 male desertion incidents.^{1/} The apprehension and processing average cost per deserter is estimated to be: Army-\$506, Navy-\$115, USMC-\$407, USAF-\$266.^{2/} The cost per accession is derived by multiplying male deserters by the apprehension and processing cost per deserter to arrive at total cost for male deserters. This is then divided by total male NPS accessions to get the per accession cost. The calculation and result is shown below.

c. Result

The per accession cost of desertion:

^{1/} "Report of Unauthorized Absence and Desertion", OSD MRA&L MPP-PAS, FY78.

^{2/} "Plan for a Deserter Apprehension Program" July 1978. (OSD directed study under Army sponsorship for all DoD).

	<u>Male Deserters</u>	<u>Total Male Deserter Cost (000's)</u>	<u>NPS Male Cost/ Accession^{1/}</u>
Army	9973	5046	\$ 47
Navy	13828	1590	21
USMC	6801	2768	74
USAF	289	768	1

1/ Male deserters x cost/deserter = total male deserter cost
+ Male NPS accessions = Cost/Accession.

G. MEDICAL (2.6)

1. Definition

Medical costs for the first six months of military service are those costs attributable to outpatient visits and use of hospital facilities by trainees during the accession pipeline process. Medical costs after the accession pipeline process are in the same category as pay and allowances and are not considered.

2. Methodology

Service medical support costs were estimated using average costs taken from the January 1979 FYDP, PE87471 (Care in Defense Facilities) for FY78. This total is multiplied by 45.5% since 47% of outpatient visits and 44% of beds occupied, an average of 45.5%, (AVF Data Book) are active military (i.e., not dependents or retired military).

	MP (\$000)	O&M (\$000)	Total (\$000)	Active Share (\$000)
Army	\$397886	+	\$476530 = \$874416	x .455 = \$397859
Navy/USMC	313755	+	283271 = 597026	x .455 = 271647
USAF	453517	+	220998 = 674515	x .455 = 306904

	Cost Per Active Manyear ^{1/}	Average Cost/Male NPS Accession ^{2/}
Army	\$512	\$238
Navy/USMC	377	173
USAF	538	252

^{1/} Cost per active Manyear is calculated as follows: Active Share (\$) ÷ Average Strength. (Average Strength for FY78 (000): Army 776.45, Navy/USMC = 529.9/191.2 (721.1), USAF = 570.0).

^{2/} Accession pipeline period for 6 months adjusted by attrition - expected man-months from Section II.G., example Army: \$397,359 ÷ 776.45 = \$512. \$512 x $\frac{5.5810}{12}$ = \$238.

3. Result

The FY78 average cost of medical care for trainees is shown below by appropriation per accession:

	<u>MP</u>	<u>O&M</u>	<u>Total</u>
Army	\$130	\$108	\$238
Navy/USMC	82	91	173
USAF	83	169	252

H. ENLISTMENT BONUS (2.7)

1. Definition

The enlistment bonus is designed to provide DoD with an enlistment incentive in designated military specialties characterized by inadequate numbers of enlistments to meet accession objectives (DoDI 1304.22). Minimum criteria includes high school equivalency and classification in mental category groups I, II or III. The bonus is not paid until training is completed and award of the designated military specialty. Currently the Army and USMC are prime users of the bonus, principally for combat specialties. The Navy is using a limited number of bonuses in the boiler technician specialty. This is a Military Personnel Appropriation cost.

2. Methodology

The FY78, FY79 and FY80 budgeted costs for enlistment bonuses were distributed on a cohort basis so that a fiscal year per accession cost could be computed. Since the bonus is a distribution method designed to get male high school graduates to join shortage skill areas the costs should be distributed across male high school diploma graduates (MHSDG). Calculation and result are shown below.

3. Result

Enlistment bonus cost per MHSDG:

	Total Cohort Bonus Cost ^{1/} (000)	NPS MHSDG Accessions ^{2/} (000)	Ave. Bonus Per MHSDC Accession
<u>FY78</u>			
Army	33542	74.6	\$450
Navy	--	N/A	--
USMC	7969	27.5	290
USAF	--	N/A	--
<u>FY79</u>			
Army	35443	87.6	\$405
Navy	900	58.7	15
USMC	7679	31.9	241
USAF	--	N/A	--
<u>FY80</u>			
Army	33412	85.8	\$390
Navy	5800	61.1	95
USMC	7700	30.0	257
USAF	--	N/A	--

^{1/} FY80 President's Budget less bonus to female NPS. Includes payment by cohort i.e., new payment plus residual. (OSD MRA&L MPP-EPM).

^{2/} OSD MRA&L MPP-A&R.

I. VETERANS BENEFITS

Although Veterans Benefits are a non-DoD cost, it has been argued that the cost to the government remains. This was recently pointed out in a GAO study on costs of attrition.^{1/} The assistant director of Federal Personnel and Compensation provided the MCR team with a Veterans Administration letter and other data from that study. GAO calculated an average benefit of \$10,111 per attritee. Because this is not a DoD cost we did not include this cost in our methodology.

^{1/} GAO study FPCD-79-28, "High Cost of Military Attrition Can be Reduced", February 16, 1979.

IV. ANALYSIS

A. INTRODUCTION

A comparison of the variable costs per NPS enlisted male accession shows variation among the four military services due principally to the differences in the manner in which each service trains personnel and the differences in cost caused by these variations. Also, the non-training costs vary somewhat, primarily because of recruiting and bonus costs. Each of the principal cost elements: training and non-training are analyzed separately in the following sections. A chart showing the various costs by Work Breakdown Structure (WBS) and Service is provided on the following page.

B. TRAINING COSTS

1. Mission Cost

An examination of mission training costs reveals a considerable difference between the Army high of \$1,227 per accession and the Air Force low of \$452 per accession. The difference is owing to primary factors. First, there is higher variable manpower in support of Army Training, i.e., for each 1,000 training loads the Army has an average of 179.9 variable mission manyears. For each 1,000 Air Force training loads there are an average of 105.7 variable mission manyears. The difference may be affected by the relatively stable level of Air Force accessions - which has a variable only for instructors since the school squadrons would only change if accession levels vary by 10,000 or more. Shown below is a comparison of average yearly accessions for FY77-FY80 compared with the largest expected percent variation for each Service:

<u>WBS Cost Category</u>	<u>ARMY</u>	<u>NAVY</u>	<u>USMC</u>	<u>USAF</u>	<u>DoD (Ave)</u>
1.0 Training Costs	<u>4,673</u>	<u>4,754</u>	<u>3,821</u> ^{3/}	<u>3,961</u>	<u>4,435</u>
1.1 Mission	<u>1,227</u>	<u>967</u>	<u>532</u>	<u>452</u>	<u>904</u>
1.1.1 P&A Military	705	787	335	385	612
1.1.2 P&B Civilian	60	96	6	--	50
1.1.3 Other Mission	462	83	191	67	242
1.2 Support	<u>607</u>	<u>981</u>	<u>492</u>	<u>645</u>	<u>701</u>
1.2.1 P&A Military	103	244	173	209	173
1.2.2 P&B Civilian	270	565	242	269	346
1.2.3 Other Support	234	172	77	167	182
1.3 Trainee Pay and Allowances	<u>2,839</u>	<u>2,807</u>	<u>2,797</u>	<u>2,864</u>	<u>2,830</u>
2.0 Non-Training Costs	<u>4,661</u>	<u>3,611</u>	<u>4,041</u>	<u>2,752</u>	<u>3,903</u>
2.1 Recruiting ^{1/2/}	<u>2,391</u>	<u>1,906</u>	<u>2,053</u>	<u>1,203</u>	<u>1,973</u>
2.2 Examining ^{2/}	149	149	149	149	149
2.3 Personnel Processing	783	752	702	690	740
2.3.1 Processing In	88	86	86	60	82
2.3.2 Clothing Issue	396	375	363	380	383
2.3.3 Processing Out	88	86	86	60	82
2.3.4 Separation Payment	211	205	167	190	199
2.4 Permanent Change of Station	<u>434</u>	<u>468</u>	<u>389</u>	<u>413</u>	<u>433</u>
2.4.1 Accession PCS	330	340	267	295	317
2.4.2 Separation PCS	104	128	122	118	116
2.5 Disciplinary	<u>216</u>	<u>163</u>	<u>285</u>	<u>45</u>	<u>173</u>
2.5.1 Administrative	17	24	30	12	24
2.5.2 Prisoner	152	118	181	32	125
2.5.3 Deserter	47	21	74	1	24
2.6 Medical ^{2/}	<u>238</u>	<u>173</u>	<u>173</u>	<u>252</u>	<u>214</u>
2.7 Enlistment Bonus ^{1/}	<u>450</u>	N/A	<u>290</u>	N/A	<u>215</u>
	<u>9,334</u>	<u>8,365</u>	<u>7,862</u>	<u>6,713</u>	<u>8,338</u>

^{1/}Applies only to male high school diploma graduates
Accession cost for non-HSDG males should be adjusted accordingly.

^{2/}Average cost used as variable cost.

^{3/}Does not include \$177 of USMC Training Cost from other Services.

Figure IV-1. FY78 VARIABLE COST PER NPS
ENLISTED MALE ACCESSION (\$)

	<u>Army</u>	<u>Navy</u>	<u>USMC</u>	<u>USAF</u>
Average FY77-80 NPS Accessions:	149.5	89.4	42.6	69.4
Largest variation:	17.1%	16.7%	7.0%	2.0%

The Army and Navy both include "other variable mission manpower"^{1/} as variable manpower because of the fluctuation in training loads due to more extreme accession patterns. The other factor that increases the cost of Army training is a much higher "other mission cost" of \$462 per accession compared with a cost of \$67 for the Air Force. This is due primarily to Army procurement costs which average \$363 per accession for ammunition and large equipment such as tanks and artillery. The Army also furnishes a good deal of Initial Skill Training to the Marine Corps and the procurement cost for this training is borne by the Army for the Marine Corps, i.e., \$18 per Marine NPS Accession. About 4% of the Army Initial Skill workload is Marines. The Marine Corps procurement cost of \$83 per accession pays for rifle ammunition during Recruit Training.

Some other reasons for differences in training costs are the large number of Marines trained by other Services (25%), for which approximately \$177 per accession could be considered as a cost borne by other Services (see Marine Corps section on costs of other Service training). About 13% of the Navy Initial Skill workload is Marines. The Navy mission cost of training is comparable to the Army mission cost once the

^{1/} "Other variable mission manpower" is the change in training structure caused by extreme load fluctuations: number of training companies, administrative support, issuance of training materials and so forth.

procurement cost (ammunition, etc.) is deducted for the Army: \$891 for the Navy compared to \$864 per accession for the Army.

A final consideration is the cost added by length of training. The Navy has an average of 144 days of training per accession compared with 129 days for the Army, 131 days for the Marine Corps (122 without other Service training) and 126 days for the Air Force.^{2/} If the Navy "other variable mission manpower" cost is deducted (\$323) and the length of training is taken into account (14% longer than Air Force) then the Navy mission cost could be \$554 which is comparable to the \$452 per accession cost for the Air Force. See the figure on the following page for calculations of average number of training days per accession by Service.

2. Support Cost

The "support cost" of training is also termed "base operating support-training" and the cost per accession is comparable for all the Services. The extremes, \$981 for the Navy and \$492 for the Marine Corps, are caused to some degree by (1) the Marine Corps sending 13% of enlisted initial entry training load to the other Services, and (2) the Navy having a higher variable staffing ratio for civilians than the other Services, as shown below:

	<u>Ratio of Variable Support Manpower to Average Training Load</u>		
	<u>Army</u>	<u>Navy</u>	<u>USAF/USMC</u>
Officer	.003	.004	.004
Enlisted	.021	.055	.042
Civilian	.043	<u>.089</u>	.039

^{2/} See Figure IV-2.

FY 78 Army Average Accession Period Calculation:

<u>%</u>	<u>Training Days</u>	<u>Expected Training Days</u>
26.3	x 92.5	= 2432.8
11.2	x (58.4 + 69.4 + 72.3)	= 2241.1
4.7	x (92.5 + 72.3)	= 774.6
43.2	x (58.4 + 69.4)	= 5521.0
3.3	x (58.4 + 95.5)	= 507.9
0.3	x (58.4 + 47.8)	= 31.9
<u>89.0</u>		<u>11509.3</u> = 129.3 days + 14.4 leave and travel = <u>143.7 days</u>

SOURCE: FY1980 MMTR backup data and Army Staff (DCSOPS-TRI)

FY78 Navy Average Accession Period Calculations:

<u>%</u>	<u>Training Days</u>	<u>Expected Training Days</u>
21.8	x (63.5 + 17.1)	= 1757.1
4.3	x (63.5 + 44.9)	= 466.1
41.9	x (63.5 + 89.7)	= 6419.1
18.4	x (63.5 + 89.7 + 51.6)	= 3768.3
0.2	x (63.5 + 50.3)	= 22.8
2.2	x (63.5 + 100.5)	= 360.8
<u>88.8</u>		<u>12794.2</u> = 144.08 days + 20.73 leave and travel = <u>164.8 days</u>

SOURCE: Navy OP-01 and Chief Navy Education and Training (CNET)

FY78 Marine Corps Average Accession Period Calculation:

<u>%</u>	<u>Training Days</u>	<u>Expected Training Days</u>
30.0	x 93	= 2790
2.2	x (93 + 29.3)	= 269.1
29.7	x (93 + 58.6)	= 4502.5
23.8	x (93 + 60.4)	= 3650.9
1.3	x (93 + 30.2)	= 160.2
<u>87.0</u>		<u>11372.7</u> = 130.7 days + 27.3 leave and travel = <u>158 days</u>

SOURCE: FY1980 MMTR backup data and Marine Corps Staff (MPP-42 and MCC-OTTB).

FY78 Air Force Average Accession Period Calculation:

<u>%</u>	<u>Training Days</u>	<u>Expected Training Days</u>
8.4	x 46.5	= 391.4
2.8	x 92.6	= 259.3
73.8	x 138.5	= 10221.3
5.0	x 93.0	= 465.0
<u>90.0</u>		<u>11337.0</u> = 126.0 days + 15.7 leave and travel = <u>141.7 days</u>

SOURCE: FY1980 MMTR backup data and Air Staff (MPP/TP-ST).

Figure IV-2. ACCESSION PIPELINE PERIOD CALCULATIONS

The higher Navy staffing is attributable in large degree to the many separate training installations operated by the Navy for specialized skill training (34) as compared to the Air Force (8). The Army also maintains a large number of training installations (27) but is able to use troop units on the same installations as "borrowed labor" to support training (Also the Army has 67% more NPS accessions to train).

3. Trainee Pay and Allowances

Slight variance due to different attrition rates.

C. NON-TRAINING COSTS

Among the Services, non-training costs vary by only small amounts once recruiting and enlistment bonus costs are removed:

	<u>Army</u>	<u>Navy</u>	<u>USMC</u>	<u>USAF</u>
Total Non-Training Cost:	\$4,661	\$3,611	\$4,041	\$2,752
(-) Recruiting/Bonus:	<u>2,841</u>	<u>1,906</u>	<u>2,343</u>	<u>1,203</u>
	\$1,820	\$1,705	\$1,698	\$1,549
% of average (1693):	107%	101%	100%	92%

No single cost is substantially different from one service to another, other than the variation in recruiting and advertising cost which is a function of difficulty in obtaining accessions. The enlistment bonus is a means of distributing accessions into less desired (by the accession) skill areas.

Appendix A

DEFINITIONS

Appendix A - DEFINITIONS

GENERAL:

AVERAGE COST - Total costs divided by number of persons involved.

VARIABLE COST - Costs that change as workload changes.

TRAINING COSTS - Training costs, are a precisely defined set of accounts. These accounts were established through the methodological process of a detailed examination of how resources were consumed during the cycle of accepting male, non-prior service (NPS) personnel and providing them with the skill development necessary for assignment to a military unit.

NON-TRAINING COSTS - The non-training costs are defined as those individual or other costs which occur during the accession process (prior to arrival at first duty assignment), but are not related to training.

MISSION - Mission activities are those that are directly related to training, such as instruction, command, training overhead, and direct training support.

SUPPORT - This includes the base operations functions necessary to maintain the training base within the range of military man-years supported. It includes:

- Post Supply Operations
- Maintenance of Material
- Support Maintenance (Direct and General Support) of Equipment
- Transportation Services
- Laundry and Dry Cleaning Services
- Food Service
- Personnel Support
 - Chaplain
 - Command Information
 - Recreation Services
 - Military & Civilian Police
 - Traffic
 - Physical Security
- Bachelor Housing Support
- Operation of Utilities
- Maintenance and Repair of Real Property
- Minor Construction
- Engineering Support

FYDP - Five Year Defense Program published each January giving official dollars, manpower, and forces for DoD as contained in the President's Budget. Updated in May and October for the POM and Senate Budget Estimates.

PROGRAM ELEMENT - Breakout of DoD program structure by functional area used in the FYDP to display manpower and cost data by fiscal year.

TRAINING LOAD - Student man-year. The total training load of a service is all of that service's students trained by itself or other services; i.e., all Army students trained by the Army, Navy, Marines, or Air Force.

APPROPRIATION - How Congress approves DoD funds. The ones we are interested in: (1) O&M-opns and maintenance which is civilian personnel and things; (2) MP-Military Personnel-pay, travel, allowances; (3) Procurement-ammunition and larger pieces of equipment.

ACCESSION - A new member of Military Service.

MANPOWER FACTORS:

MISSION MANPOWER FACTORS - Input factors affecting mission (direct training) costs. The mission manpower factors are variable within the range of training loads or accessions indicated. That is, if the training load range is 10,000 to 15,000, any increase or decrease in the training load within this range could result, without an increase or decrease in assigned personnel at a per training load rate equal to the factor. If the total Officer per Training Load factor is .02, a decrease in training load of 1000 would be accompanied by a decrease of two Officers, all other things being equal. Further described below:

TRAINING LOAD - Student man-year (average number of students times fraction of year spent in training course).

- # TOTAL OFFICERS PER TRAINING LOAD - The total of Officer instructors per training load and enlisted other variable per training load.
- # TOTAL ENLISTED PER TRAINING LOAD - The total of enlisted instructors per training load and enlisted other variable per training load.
- # OFFICER INSTRUCTORS PER TRAINING LOAD - The number of Officers per training load engaged in direct instruction of trainee/students. These may be assigned to training companies or instructor groups.
- # ENLISTED INSTRUCTORS PER TRAINING LOAD - The number of enlisted personnel per training load engaged in direct instruction of trainee/students. Includes Drill Instructors, Physical Education and Training Instructors, Weapon and Equipment Specialists, Platoon Leaders and equivalents, and others directly involved in instruction.

WORKLOAD - Student man-year. The total workload of a service is all students trained by that service, both its own and other services' students; i.e., all students trained by the Army.

- # OFFICER, OTHER VARIABLE, PER TRAINING LOAD - The number of Officers per training load required to provide direct mission overhead and support. Includes Instructor Supervisors, Command Personnel, Battalion or equivalent staff such as Officer personnel in the Personnel, Operations and Training, Logistics, Administration, and Special Staff sections. Includes Officers with direct managerial and administrative responsibilities for training at Training Installations. Support functions include preparation and revision of training schedules, submission of reports to higher headquarters and other activities directly related to training.
- # ENLISTED, OTHER VARIABLE, PER TRAINING LOAD - The number of enlisted personnel per training load required to provide direct mission overhead and support. Includes administrative, clerical, supply, and command personnel. Includes enlisted personnel in battalion or equivalent staff such as personnel, operations and training, logistics, administration, and special staff sections. Includes drivers and motor pool personnel. Includes personnel for first echelon maintenance, equipment operation, range operations, and other activities necessary to accomplish training.
- # TOTAL CIVILIANS PER TRAINING LOAD - The total of civilian instructors per training load and civilian, other variable, per training load.
- # CIVILIAN INSTRUCTORS PER TRAINING LOAD - The number of civilians per Training Load engaged in direct instruction of trainee/students.
- # CIVILIAN, OTHER VARIABLE, PER TRAINING LOAD - The number of civilians per Training Load required to provide direct mission overhead and support. Includes clerical, administrative personnel, and personnel with technical skills required by the Direct Training Mission.

SUPPORT MANPOWER FACTORS - Input factors affecting support costs (WBS #1.2) described below (see definition of SUPPORT above).

- # TOTAL OFFICERS PER TRAINING LOAD - The number of officers utilized for indirect support supervision of the training installation per training load.
- # TOTAL ENLISTED PER TRAINING LOAD - The number of enlisted personnel utilized for support functions of the training installation per training load.

TOTAL CIVILIAN PER TRAINING LOAD - The number of civilians utilized for support functions of the training installation per training load. This category includes trade craftsmen such as electrician, plumbers, and equipment operators as well as clerical and administrative personnel.

COST FACTORS:

OFFICER AVERAGE ANNUAL PAY -

ENLISTED AVERAGE ANNUAL PAY -

See Section II.B.1.

AVERAGE ANNUAL PAY & BENEFITS CIVILIAN -

MISSION VARIABLE O&M (Non-Personnel) PER TRAINING LOAD - This cost category provides for expendable supplies consumed during the conduct of training. It includes spare parts for organizational equipment, paper and office supplies, organizational closing including expendable athletic gear, course materials, and training aids.

VARIABLE PROCUREMENT COSTS PER TRAINING LOAD - This cost category provides for the expenditure of ammunition in training, and costs associated with major equipment used in training. Tanks, armored personnel carriers, self-propelled guns and missile launchers are examples of major equipment.

SUPPORT VARIABLE O&M COSTS (Non-Personnel) PER TRAINING LOAD - This cost category provides for expendable supplies used in the operation and maintenance of the installation. It also includes contract costs for such items as food services, hauling of trash, contract security services, and repairs to installation facilities and equipment not performed by direct hire personnel.

Appendix B

ACCESSION PROCESS NETWORKS

Appendix B
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ACCESSION PROCESS, NETWORKS AND DEFINITIONS

This Appendix develops a Generalized DoD Accession Process Network to define the overall process which was costed in the report. Specific Nodes (start and stop points) and Arcs (activities) are identified and defined. It was these Arcs (activities) with specific attributable costs that were of concern to us. Our analysis of the original Service networks resulted in several terms not listed with one or more Service networks. Thus the General DoD Accession Process Network is generalized from the Service networks, and allows some of the more complicated sections of the Service networks to be streamlined and greatly simplified for future costing purposes. The complex Service networks were then streamlined in light of the Generalized DoD network. The reconfigured Service networks are also included with Service peculiar definitions.

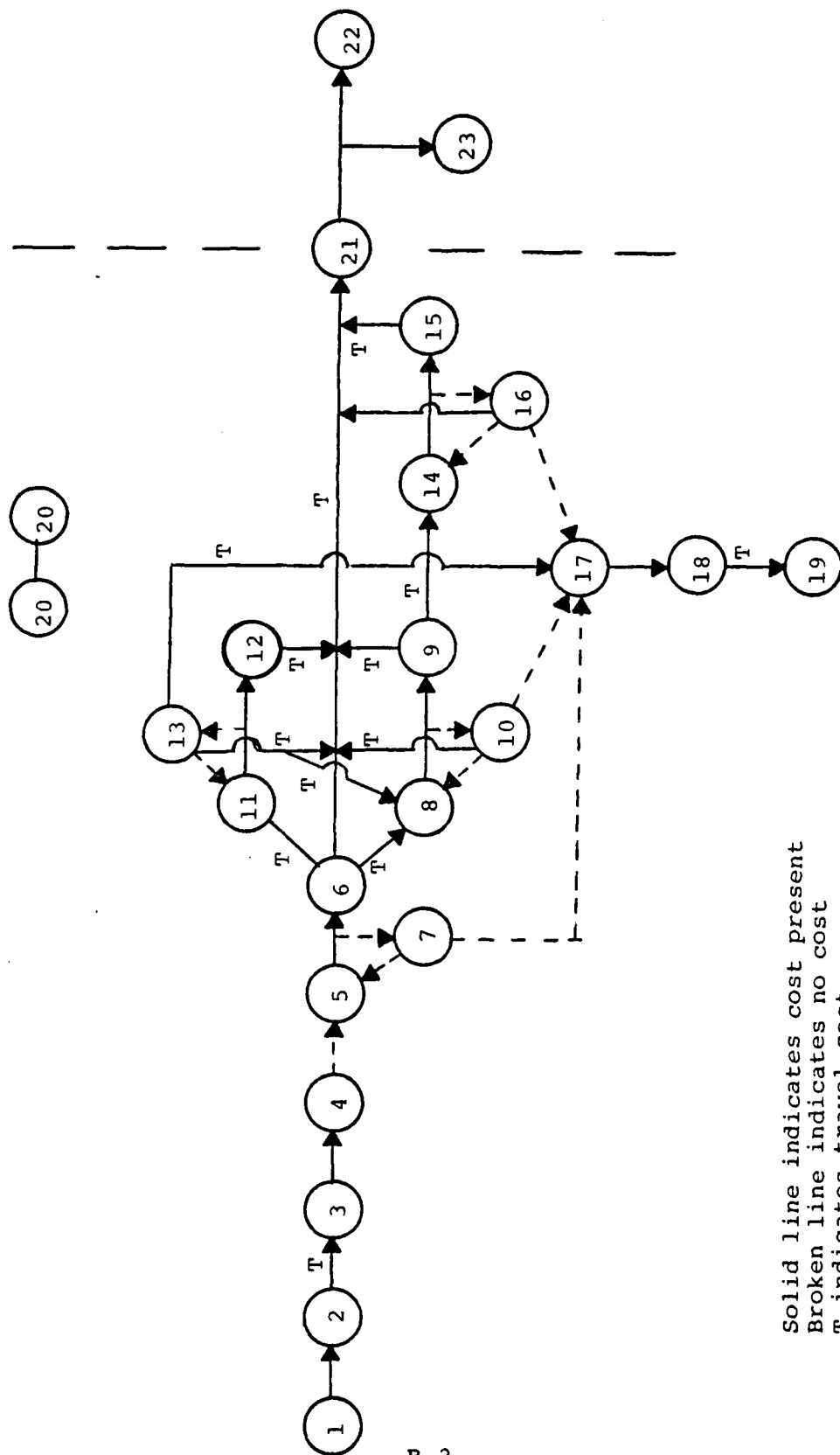
The accession process networks and definitions that are described below are therefore the result of a three step process. First MCR developed individual service networks (with active assistance of each military service). These are somewhat complicated but MCR identified and developed definitions for the Nodes (start and stop points) and Arcs (activities). MCR then developed a generalized DoD network and a consistent set of definitions. These definitions were then used in the third step to reconfigure the service networks. The result, simplified accession process networks for each service, are shown below.

Each Service is in the following order:

- schematic (network),
- identification of Nodes,
- identification of Arcs,
- definitions.

The DoD section combines the identification of Nodes and Arcs with the definitions.

Figure 1. GENERALIZED DEPARTMENT OF DEFENSE ACCESSION PROCESS NETWORK



A. Generalized DoD Accession Process Network

For the Generalized DoD network the identification of Nodes and Arcs (activities) is combined with the definitions due to the increased difficulty of understanding the consolidated service processes.

1. Identification/Definition of Nodes.

Nodes are defined for the network in Figure 1.

- (1.) Arrive at AFEEES. Examination both mental and physical and necessary processing prior to departure for recruit training. All active accessions to through this activity.
- (2.) Depart AFEEES. Accession departs for Recruit training.
- (3.) Start Inprocessing. The administration required to prepare the new inductee for training: issuance of military clothing and records preparation. This may be done prior to commencement of training or coincident with it.
- (4.) Complete Inprocessing. Completion of those actions needed to prepare a trainee for his training.
- (5.) Start Recruit Training. All services require a form of basic military training varying in length from six weeks in the Air Force to ten weeks in the Marine Corps. In the Army about half the trainees will go to one station unit training (OSUT) which combines Recruit and initial skill training for a single training course of approximately twelve weeks.
- (6.) Complete Recruit Training. Successful completion of Recruit training is required of all accessions. At this point some Recruits with civilian acquired skills may be assigned to an operational assignment. Also, certain others may receive a duty

assignment for on-the-job training (OJT). The Marine Corps assigns about 35% in this manner. The Navy sends 30% of Recruits to short (two to four weeks) apprenticeship courses as part of initial skill training.

- (7.) Recycle/Separate. Unsuccessful trainees may be recycled for part or all of Recruit training. Failures and those unsuitable for service are discharged.
- (8.) Start Initial Skill Training. In order to have a specific military (usable) skill most trainees attend initial skill training. As mentioned previously, the Navy includes apprentice training in this category although it is in reality an extension of Recruit training. Apprentice training does not provide a "skill" but is rather a familiarization course. The amount of time spent in initial skill training depends on the degree and difficulty of the skill to be gained. Also this may consist of several courses.
- (9.) Complete Initial Skill Training. At this point the preponderance of trainees are assigned to an operational duty assignment.
- (10.) Recycle/Retrain/Direct Assignment/Separate. Unsuccessful trainees may be recycled, retrained in a different skill, directly assigned to a unit for OJT or separated as unsuitable. All of these do not apply to each service. In general, the Navy will not send anyone to a unit without, as a minimum, apprentice training. The Army will usually require completion of some form of initial skill training. The Marine Corps and Air Force will send initial skill training failures directly to a unit for OJT.

- (11.) Start Initial Skill Training (Other Service).
This is service personnel going to other services for training and is shown separately since the procedure varies from the normal service training process. The Marine Corps is the largest user of this.
- (12.) Complete Initial Skill Training (Other Service).
Recruits going to other services usually will go directly to a duty assignment rather than return for any further training.
- (13.) Recycle/Retrain/Direct Assignment/Separate. The likelihood of retraining or direct assignment of training failures depends on the service: Army and Navy would retrain, Marine Corps and Air Force direct assign. Recycle or separate could occur in all services, the latter for those being unfit due to disciplinary or medical reasons.
- (14.) Start Advanced Initial Skill Training. This applies to skill progression and functional training given as an immediate follow-on to initial skill training. For example, Navy "C" school, Army additional skill training, Marine & Air Force additional specialized skill training.
- (15.) Complete Advanced Initial Skill Training. Trainee assigned at this point to a unit.
- (16.) Recycle/Direct Assignment/Separate. Recycling is normally what would occur for technical skill failure while functional training failures usually would be directly assigned. Retraining would be unlikely to occur and is not considered. Separation would be only for disciplinary, medical or other unsuitability.

- (17.) Start Separation Outprocessing. The administration necessary for separation from the service.
- (18.) Complete Separation Outprocessing. Ex-service member departs for home.
- (19.) Home. Arrives at home.
- (20.) Leave. Shown separately for simplicity. Service practice varies but generally leave is allowed after each major phase in the training process. The Air Force does not authorize leave between Recruit training and initial skill training; the Navy does not authorize leave between Recruit and apprentice training; and the Army does not authorize leave during OSUT.
- (21.) Arrival at First Duty Assignment. The accession process is complete here. Trained servicemen start operational duties and OJT (if applicable).
- (22.) End First Enlistment. Full completion of first enlistment.
- (23.) Separation Prior to End First Enlistment. Attrition due to unfitness/unsuitability prior to finishing first duty tour.

2. Identification/Definition of Arcs/Costs

- (1-2.) Examining. The cost of PE81713 for all services proportionate to active accessions.
- (2-3, 6-8, 6-11, 6-21, 9-21, 10-21, 12-21, 13-21, 15-21, 16-21.) Accession Travel. PCS costs of enlisted travel from AFEES to training, between training and to first duty assignment.

- (3-4.) Inprocessing. The costs of inprocessing at Reception Station (Army), Personnel Processing Groups (USAF), Recruit Training Center (Navy) or Recruit Depots (USMC).
- (4-5.) No Cost.
- (5-6.) Recruit Training. Costs of training, training support and other support. Excludes pay and allowances for trainees.
- (5-7.) No Cost.
- (7-5.) No Cost.
- (7-17.) No Cost.
- (8-9.) Initial Skill Training. Costs of training, training support and other support. Excludes pay and allowances for trainees.
- (8-10.) No Cost.
- (10-8.) No Cost.
- (10-17.) No Cost.
- (11-12.) Initial Skill Training (Other Service). Cost of other service skill training.
- (11-13.) No Cost.
- (13-11.) No Cost.
- (13-17,
18-19.) Separation Travel. Travel costs of enlisted separatees from accession process.
- (14-15.) Advanced Initial Skill Training. Costs of training and support.
- (14-16.) No Cost.
- (16-14.) No Cost.
- (16-17.) No Cost.

- (17-18.) Separation Outprocessing. Administrative out-processing costs of separatees conducted at Personnel Processing Group/Personnel Section (Air Force), Transfer Point (Army), Transient Personnel Unit (Navy), Recruit Depot/Personnel Section (USMC).
- (20-20.) Leave. Pay and Allowances. A time determined cost that increases non-productive period prior to first duty assignments.
- (21-22.) No Cost.
- (21-23.) Attrition Cost After Accession Process. Cost of attrition during first duty assignment. No pay and allowance cost. Separation outprocessing, travel home, terminal leave, bonus, other (aggregate values).

3. Other Definitions

Trainee. Active duty enlisted person undergoing initial entry training. Identified by Resource Identification (Code (RIC) 0138 (Air Force Trainee)).

Student. Active duty military persons attending school (excluding trainees). Identified by RICs 0041-0044 (Officer Students) and 0131-0134 (Enlisted Students).

Transient. Military Personnel in PCS travel status. Excludes persons traveling upon entry into active service to and between initial entry courses of instruction.

Initial Clothing Issue. Cost of initial clothing issued during inprocessing for Recruit training.

Enlistment Bonus. A bonus paid upon completion of training to selected skills in accordance with DoD Instruction 1304.22. No Air Force enlistment bonus currently being paid.

Trainee Pay and Allowances. Separately identified military personnel costs to include basic pay, basic allowance for quarters and subsistence (usually in-kind), and social security. E-1 for first six months of active duty.

Patient/Prisoner. The personnel holding account (PE887210) provides for manpower authorizations and associated costs for both medical and disciplinary nonavailability (Patients and Prisoners). It is important to note that the categorization of patient requires the expectation of ninety or more days of hospitalization and that of prisoner requires confinement after conviction. All other persons in hospitals and confinement are not accounted for as patients and prisoners but rather in their assigned unit.

Deserter Status. Defined generally as absent without authorization for a period of 30 or more days.

Direct Assignment to First Duty Station. After completion of Recruit Training (BCT, BMT, CST, "Boot Camp") some trainees are sent directly to a unit for operational duty. This may be due to civilian acquired skills, failure to complete initial skill training or for on-the-job training (OJT). During FY 1977 the quantity assigned directly to units was: Army, 4 percent; Marine Corps, 25 percent; and Air Force, 9 percent. The Navy seldom sends recruit training graduates direct to operational assignments. However, 20 percent receive short (two week) apprenticeship training courses after Recruit training and then are assigned.

Recruit Training and One Station Unit Training.

Recruit training is conducted at one or more places by each service. Additionally, the Army trains a number of soldiers with a single course of instruction which combines recruit and initial skill training - the latter is called one station unit training (OSUT). These centers are:

Air Force - Lackland AFB

Navy - RTC Great Lakes, Orlando, San Diego

Marine Corps - Parris Island, San Diego

Army - Fort Bliss, Fort Dix, Fort Jackson (no OSUT),
Fort Knox, Fort Leonard Wood, Fort McClellan,
Fort Sill, Fort Gordon, Fort Benning (OSUT
only).

B. Army Accession Process Network

Figure 2 shows the simplified and reconfigured Army network. The sections below cover:

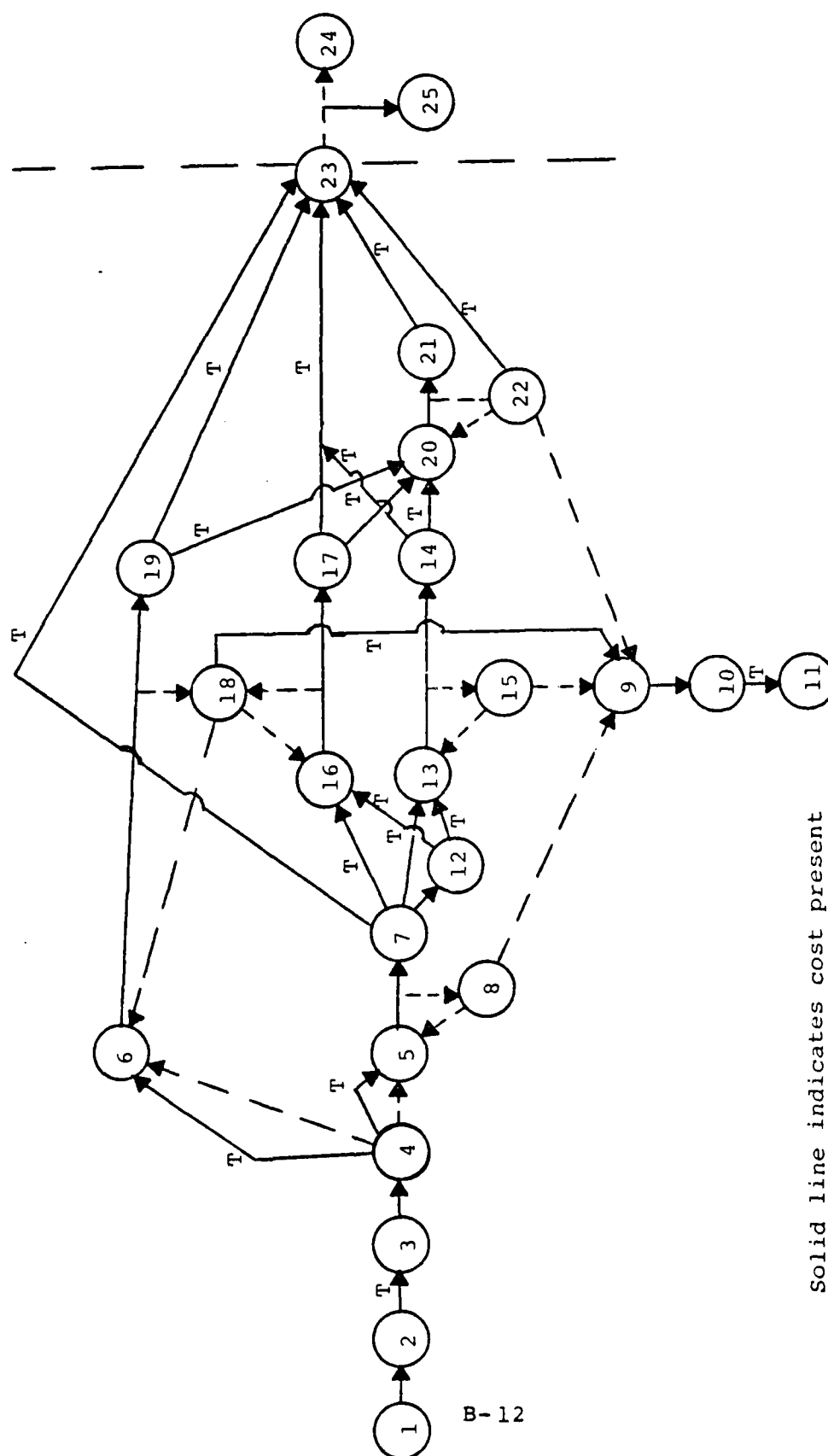
- Identification of Nodes
- Identification of Arcs
- Definitions
 - Nodes
 - Arcs

1. Identification of Nodes.

Nodes are defined for the network in Figure 2.

- (1.) Arrive at AMES
- (2.) Depart AMES
- (3.) Arrive at Reception Station
- (4.) Complete Reception Station Processing
- (5.) Start Recruit Training
- (6.) Start OSUT
- (7.) Complete Recruit Training, Civilian acquired skills go to first Duty Station
- (8.) Recruit Training Losses Identified. Training recycle or discharge
- (9.) Trainee Discharge Identified
- (10.) Separation
- (11.) Home
- (12.) Leave
- (13.) Start Initial Skill Course
- (14.) Complete Initial Skill Course
- (15.) Losses Identified: recycle or discharge
- (16.) Start Initial Skill Course (Other Service)
- (17.) Complete Initial Skill Course (Other Service)
- (18.) Losses Identified: recycle or discharge
- (19.) Complete OSUT
- (20.) Start Additional Skill Training
- (21.) Complete Additional Skill Training

Figure 2. ARMY ACCESSION PROCESS NETWORK



Solid line indicates cost present
Broken line indicates no cost
T indicates travel cost

- (22.) Loss Identified: recycle or discharge
- (23.) First Duty Station
- (24.) End First Enlistment
- (25.) Separation prior to End First Enlistment

2. Identification of Arcs.

- (1-2.) Examining/Processing
- (2-3.) Travel Cost (A)
- (3-4.) Reception Station Cost
- (4-5.) Some Travel Cost (A)
- (4-6.) Some Travel Cost (A)
- (5-7.) Training Cost
- (5-8.) No Cost
- (6-18.) No Cost
- (6-19.) Training Cost
- (7-12.) Pay and Allowance Cost
- (7-13.) Travel Cost (A)
- (7-16.) Travel Cost (A)
- (7-23.) Travel Cost (A)
- (8-5.) No Cost
- (8-9.) No Cost
- (9-10.) Separation Processing Cost
- (10-11.) Travel Cost (S)
- (12-13.) Travel Cost (A)
- (12-16.) Travel Cost (A)
- (13-14.) Training Cost
- (13-15.) No Cost
- (14-20.) Travel Cost (A)
- (14-23.) Travel Cost (A)
- (15-9.) No Cost
- (15-13.) No Cost
- (16-17.) Training Cost
- (16-18.) No Cost
- (17-20.) Travel Cost (A)
- (17-23.) Travel Cost (A)

(18-6.) No Cost
 (18-9.) Travel Cost (S)
 (18-16.) No Cost
 (19-20.) Travel Cost (A)
 (19-23.) Travel Cost (A)
 (20-21.) Training Cost
 (20-22.) No Cost
 (21-23.) Travel Cost (A)
 (22-9.) No Cost
 (22-20.) No Cost
 (22-23.) Travel Cost (A)
 (23-24.) No Cost
 (23-25.) First Term Attrition Cost After Accession
 Process

3. Definitions

a. Nodes

- (1.) Arrival at AFEES. Individual enters Armed Forces Entrance and Examining Station for enlistment into service.
- (2.) Depart AFEES. After completion mental/physical testing and initial processing.
- (3.) Arrival at Reception Station. Enlistee arrives at first active component organization for initial processing into service prior to commencing Recruit training.
- (4.) Complete Reception Station Processing. Trainee completes processing at Reception Station. Is ready to commence Basic Training or One Station Unit Training.
- (5.) Start Recruit Training. Enlistee at Basic Training activity and commences Basic Training.

- (6.) OSUT. Enlistee at One Station Unit Training (OSUT) basic training and advanced individual training (AIT) in the same unit with the same cadre.
- (7.) Complete Recruit Training. Trainee has successfully completed Basic Training (BT).
- (8.) Losses Identified: Recycle or Discharge. Identification of trainees who are to be removed from the normal Basic Training cycle, and who may, or may not, return to Basic Training. Includes recycles, physical injuries, illness, hospitalization, non-qualification of enlistment commitment, trainee discharges.
- (9.) Trainee Discharge Identified. Identification of those training losses who will receive no further training and will be separated from the active component.
- (10.) TDP Separation. Separation of a trainee from the active component through the Training Discharge Program (TDP).
- (11.) Home. Arrival of separatee at his home or residence.
- (12.) Leave. Trainee who has completed BT, will receive Initial Skill Training in excess of ten weeks, and utilizes offered leave (not to exceed seven days) prior to commencing further training.
- (13.) Start Initial Skill Course. Trainee at training activity and commences Advanced Individual Training (AIT) to qualify for the award of an MOS upon successful completion of the training course.

- (14.) Complete Initial Skill Training. Trainee has successfully completed AIT and is MOS qualified.
- (15.) Losses Identified: Recycle or Discharge. Identification of trainees who are removed from the normal training cycle, and who may, or may not, return to training. Includes recycles, physical injuries, illnesses, hospitalizations, non-qualification of enlistment commitments, trainee discharges (TDP) and expeditious discharges (EDP). May retrain in a different skill.
- (16.) Start Initial Skill Course (Other Service). Trainee goes to other service for initial skill training.
- (17.) Complete Initial Skill Course (Other Service). Successful completion of course.
- (18.) Losses Identified: Recycle or Discharge. Identification of trainees who are removed from the normal training cycle, and who may, or may not, return to training. Includes recycles, physical injuries, illnesses, hospitalizations, non-qualification of enlistment commitment, trainee discharges (TDP) and expeditious discharges (EDP). May retrain in in different skill.
- (19.) Complete OSUT. Trainee has completed One Station Unit Training and is MOS qualified.
- (20.) Start Additional Skill Training. Trainee arrives at training activity and commences Additional Skill Training to qualify for an Additional Skill Identifier (ASI) or Special Qualification Identifier (SQI).
- (21.) Complete Additional Skill Training. Trainee has successfully completed Additional Skill Training and is qualified for an ASI or an SQI.

- (22.) Trainee Loss Identified: Recycle/Discharge/Reassign. Identification of trainees who are removed from the normal training cycle, and who may, or may not, return to training. Includes recycles, physical injuries, illnesses, hospitalizations, non-qualification of enlistment commitment, trainee discharge (TDP) and expeditious discharge (EDP). Also, trainees who fail additional skill training, but who will not be separated from the active component, nor recycled back into the Additional Skill Training program are sent to first duty station.
- (23.) First Duty Station. Trained soldier arrives at First Duty Station and becomes a member of the active force structure.
- (24.) End First Tour. Completes first enlistment.
- (25.) Separation Prior to End First Tour. Attrition due to disciplinary, medical or other reasons.

b. Arcs (Costs)

- (1-2.) Examining. The cost of PE81713 for all services divided by all active inductees.
- (2-3,4-5, 4-5,4-6, 7-13,7-16, 7-23,10-11,12-13, 12-16,14-20,14-23, 17-20,19-20,19-23, 21-23,22-23.) Accession Travel. All permanent change of station (PCS) costs associated with enlisted travel from AFEES to training/between training courses and to first duty assignment whether in training or transient status.
- (3-4.) Personnel Processing. The cost associated with PE81714A, personnel processing activities at the reception station.
- (4-5.) No Cost.
- (4-6.) No Cost.

- (5-7.) Recruit Training. Costs associated with recruit training: Instructors, Base Operating Support (BOS) to include expendables (ammunition, etc.) and other training support. Excludes pay and allowances for trainees.
- (5-8.) No Cost.
- (6-18.) No Cost.
- (6-19.) OSUT. Cost associated with OSUT: Instructors, BOS, and other training support. Excludes pay and allowances for trainees.
- (7-12.) Leave. Trainee pay and allowances included in total pay and allowance calculation for six months as E-1.
- (8-5.) No Cost.
- (8-9.) No Cost.
- (9-10.) Separation Outprocessing. Cost of outprocessing separatees not completing training.
- (10-11,
18-9.) Separation Travel. All PCS costs associated with enlisted separations during training process.
- (13-14.) Initial Skill Training and Additional Skill Training. Costs associated with all Army conducted specialized training for trainees: Instructors, BOS, expendables and other support costs. Excludes pay and allowances for trainees.
- (13-15.) No Cost.
- (15-9.) No Cost.
- (15-13.) No Cost.
- (16-17.) Initial Skill Training (Other Service). Costs of other service training. This may have to be attributable since it is possibly included

in the other services skill training costs
and is not reimbursable.

(16-18.) No Cost.

(18-6.) No Cost.

(18-16.) No Cost.

(20-22.) No Cost.

(22-20.) No Cost.

(23-24.) No Cost

(23-25.) Non-Accession Attrition Costs. Separation
processing and travel, terminal leave, bonus.
No pay and allowance cost.

C. Navy Accession Process Network

Figure 3 shows the simplified and reconfigured Navy network. The sections below cover:

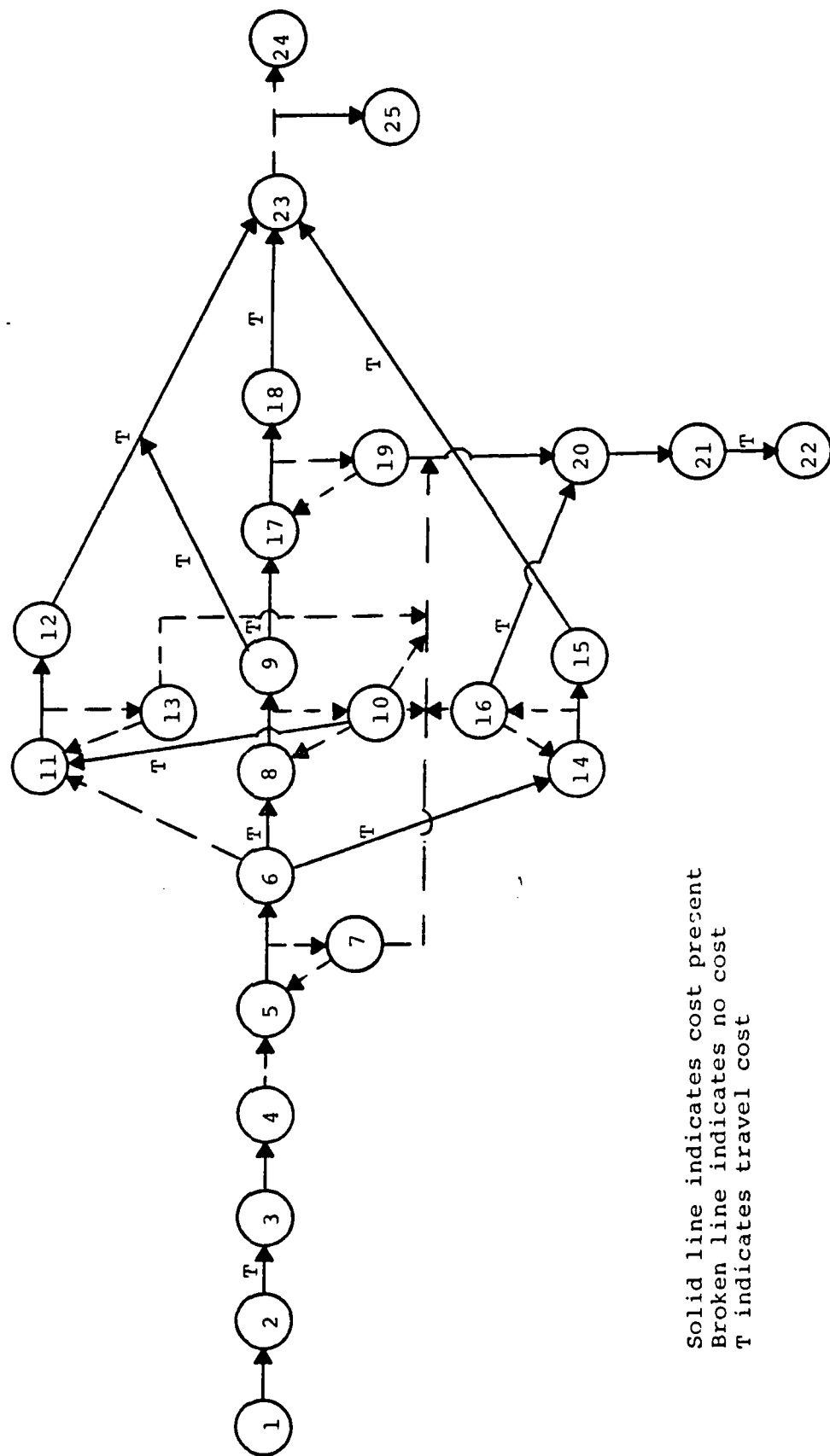
- Identification of Nodes
- Identification of Arcs
- Definitions
 - Nodes
 - Arcs

1. Identification of Nodes.

Nodes are defined for the network in Figure 3.

- (1.) Arrive at AFEES
- (2.) Depart AFEES
- (3.) Arrive Recruit Training Center - begin inprocessing
- (4.) Complete inprocessing
- (5.) Start Recruit Training
- (6.) Complete Recruit Training
- (7.) Recruit Training Losses Identified: recycle or separate
- (8.) Start Initial Skill Course(s) ("A" Schools and preliminary schools)
- (9.) Complete Initial Skill Course(s)
- (10.) Loss Identified: recycle/separate/retrain
- (11.) Start Initial Skill (Apprentice School) Course
- (12.) Complete Initial Skill (Apprentice School) Course
- (13.) Loss Identified: recycle/separate
- (14.) Start Initial Skill Training (Other Service)
- (15.) Complete Initial Skill Training (Other Service)
- (16.) Loss Identified: recycle/separate
- (17.) Start Advanced Initial Skill Course(s) ("C" school)
- (18.) Complete Advanced Initial Skill Course(s) ("C" school)
- (19.) Loss Identified: recycle/separate

Figure 3. NAVY ACCESSION PROCESS NETWORK



- (20.) Start Separation Outprocess
- (21.) Complete Separation Outprocess
- (22.) Home
- (23.) First Duty Station
- (24.) Complete First Enlistment
- (25.) Separation Prior to Completion First Enlistment

NOTE: A Node for "leave" is not shown for simplicity. However leave is authorized after each course of instruction: Recruit, Apprentice, "A" school and "C" school. The only cost would be that of trainee pay and allowances which is included in the total cost for the process period.

2. Identification of Arcs.

- (1-2.) Examining
- (2-3.) Travel (A)
- (3-4.) Personnel Processing
- (4-5.) No Cost
- (5-6.) Recruit Training
- (5-7.) No Cost
- (6-8.) Travel (A)
- (6-11) No Cost
- (6-14.) Travel (A)
- (7-5.) No Cost
- (7-20.) No Cost
- (8-9.) Initial Skill Course(s)
- (8-10.) No Cost
- (9-17.) Travel (A)
- (9-23.) Travel (A)
- (10-8.) No Cost
- (10-11.) Travel (A)
- (10-20.) No Cost
- (11-12.) Initial Skill Course (Apprentice Schools)
- (11-13.) No Cost
- (12-23.) Travel (A)
- (13-11.) No Cost
- (13-20.) No Cost

(14-15.) Initial Skill Course(s) (Other Service)
 (14-16.) No Cost
 (15-23.) Travel (A)
 (16-14.) No Cost
 (16-20.) Travel (S)
 (17-18.) Advanced Initial Skill Training ("C" school)
 (17-19.) No Cost
 (18-23.) Travel (A)
 (19-17.) No Cost
 (19-20.) No Cost
 (20-21.) Separation Processing
 (21-22.) Travel (S)
 (23-24.) No Cost
 (23-25.) First Term Attrition Cost After Accession
 Process

3. Definitions.

a. Nodes

(1.), (2.) AFEES. Examination and Processing prior to movement to Recruit Training centers.
 (3.), (4.) Personnel Processing. Inprocessing at Recruit Training centers
 (5.), (6.) Recruit Training. Basic Recruit Training of new inductees.
 (7.) Recycle/Separation. Separation from the Navy or Recycle through part or all of Recruit Training.
 (8.), (9.) Initial Skill Course(s). "A" schools and those courses required prior to "A" schools.
 (10.) Recycle/Separation/Retrain. Separation from the Navy, Recycle through a part or all of "A" school or other preparatory course, Retrain in Apprentice school.

- (11.), (12.) Apprentice School. Two to Four weeks training as Seaman, Airman or Fireman prior to First Duty.
- (13.) Recycle/Separation. Separation from the Navy or Recycle through Apprentice training.
- (14.), (15.) Initial Skill Training (Other Service). Training of enlistees by another service.
- (16.) Recycle/Separation. Separation from the Navy (vary rarely occurs) or Recycle through part or all of course.
- (17.), (18.) Advanced Initial Skill Courses. The "C" schools which provide familiarity with a particular piece of equipment or particular function. Normally would be NEC producing. Frequently attendees are professional development rather than initial skill training.
- (19.) Recycle/Separate. Separation from the Navy would in all likelihood be due to a physical disability, disciplinary cause or other non-academic reason. Recycle through a part or all of a particular course would be most likely as academic drop out is almost nil at this stage of training.
- (20.), (21.) Separation Outprocessing. Administration associated with Separation from the Navy.
- (22.) Home. Arrival at home of separatee.
- (23.) First Duty Station. First Operational Assignment.
- (24.) Complete First Enlistment. Completion of Four or more year enlistment.

(25.) Separation Prior to End First Enlistment.
Sailors separated for any reason prior to completion of first enlistment.

b. Arcs (Costs)

(1-2.) Examining. The cost of PE81713 for all services divided by all active inductees.

(2-3,6-8,6-14,9-17,9-23,10-11,12-23,15-23,18-23.) Accession Travel. PCS costs associated with enlisted travel from AFEEs to training and to first duty station.

(3-4.) Personnel Processing. Cost associated with administrative inprocessing at the Recruit Training centers.

(4-5.) No Cost.

(5-6.) Recruit Training. Costs associated with Recruit Training (and Recruit Remedial Training): Instructors, Base Operating Support to include expendables and other training support. Excludes trainee pay and allowances.

(5-7.) No Cost.

(6-11.) No Cost.

(7-5.) No Cost.

(7-20.) No Cost

(8-9.) Initial Skill Course(s). Costs associated with Initial Skill Course(s): Instructors, BOS and other support costs. Excludes pay and allowances for trainees.

(8-10.) No Cost.

(10-8.) No Cost.

(10-20.) No Cost.

(11-12.)	<u>Initial Skill Courses (Apprentice School(s)).</u> Costs associated with Apprentice schools. Excludes trainee pay and allowances.
(11-13.)	No Cost.
(13-11.)	No Cost.
(13-20.)	No Cost.
(14-15.)	<u>Initial Skill Courses (Other Service).</u> Costs of other service training. This may have to be attributable.
(14-16.)	No Cost.
(16-14.)	No Cost
(16-20.), (21-22.)	<u>Separation Travel.</u> Travel costs of en- listed separatees from accession process.
(17-18.)	<u>Advanced Skill Training ("C" School).</u> Costs associated with "C" school for initial entry training.
(17-19.)	No Cost.
(19-17.)	No Cost.
(19-20.)	No Cost.
(20-21.)	<u>Separation Outprocessing.</u> Cost of out- processing separatees not completing training.
(23-24.)	No Cost.
(23-25.)	<u>Attrition Cost After Accession Process.</u> Costs of attrition after arrival at opera- tional duty assignment. No pay and allow- ance cost. Separation outprocessing, travel, terminal leave, bonus.

D. Marine Corps Accession Process Network

Figure 4 shows the simplified and reconfigured Marine Corps network. The sections below cover:

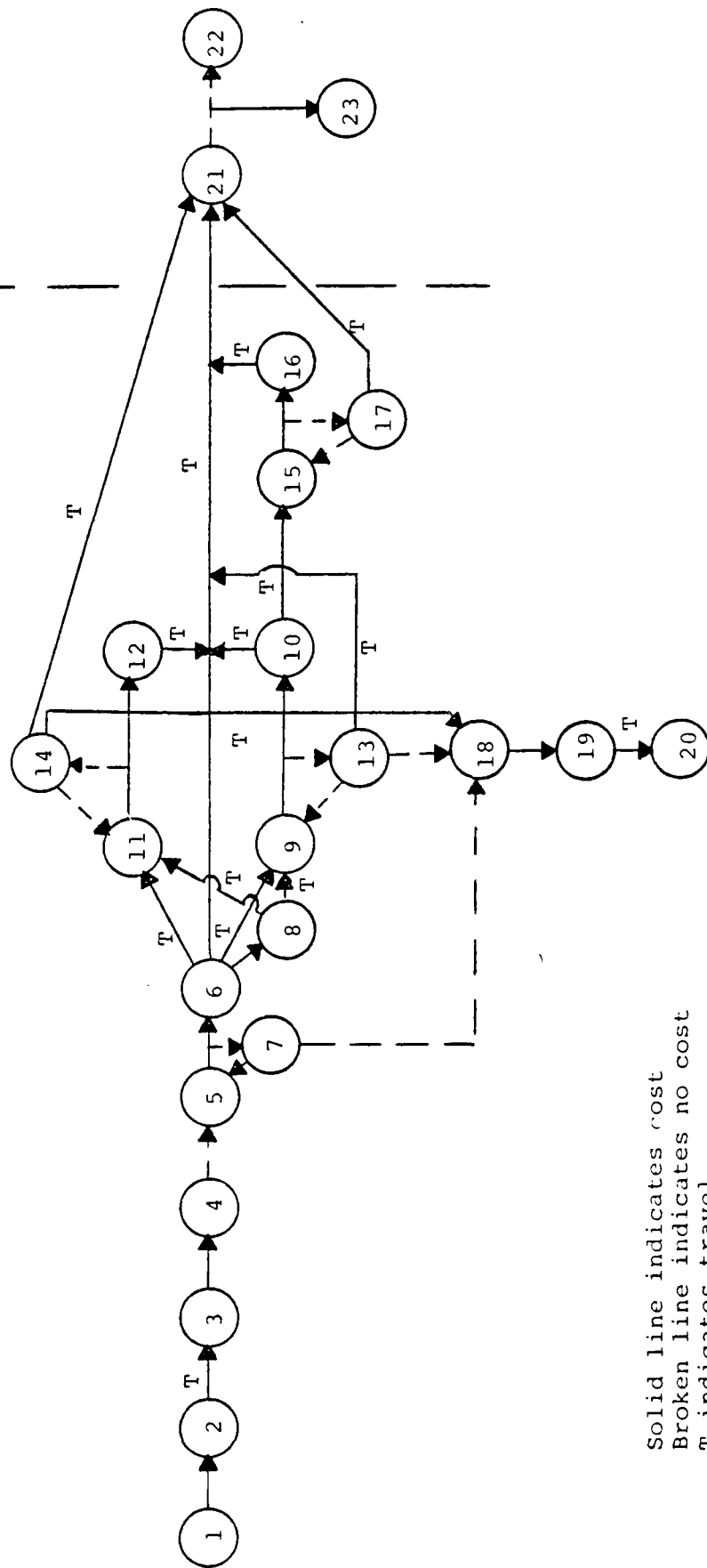
- Identification of Nodes
- Identification of Arcs
- Definitions
 - Nodes
 - Arcs

1. Identification of Nodes.

Nodes are defined for the network in Figure 4.

- (1.) Arrive at AFEEES
- (2.) Depart AFEEES
- (3.) Arrive Recruit Depot and process in
- (4.) Complete processing in
- (5.) Start Recruit Training
- (6.) Complete Recruit Training
- (7.) Recruit Training Losses Identified: Recycle or Separate
- (8.) Leave
- (9.) Start Initial Skill Training
- (10.) Complete Initial Skill Training
- (11.) Start Initial Skill Training (Other Service)
- (12.) Complete Initial Skill Training (Other Service)
- (13.) Loss Identified: Recycle, Separate, Assign to Unit
- (14.) Loss Identified: Recycle, Separate, Assign to Unit
- (15.) Start Additional Specialized Skill Training
- (16.) Complete Additional Specialized Skill Training
- (17.) Loss Identified: Recycle, Separate, Assign to Unit
- (18.) Start Separation Outprocess
- (19.) Complete Separation Outprocess
- (20.) Home
- (21.) First Duty Station
- (22.) Complete First Enlistment
- (23.) Separation Prior to End First Enlistment

Figure 4. MARINE CORPS ACCESSION PROCESS NETWORK



2. Identification of Arcs

(1-2.)	Examining/Processing
(2-3.)	Travel Cost (A)
(3-4.)	Processing Cost
(4-5.)	No Cost
(5-6.)	Recruit Training Cost
(5-7.)	No Cost
(6-8.)	Pay and Allowance Cost
(6-9.)	Travel Cost (A)
(6-11.)	Travel Cost (A)
(7-5.)	No Cost
(7-18.)	No Cost
(8-9.)	Travel Cost (A)
(8-11.)	Travel Cost (A)
(9-10.)	Training Cost
(9-13.)	No Cost
(10-15.)	Travel Cost (A)
(10-21.)	Travel Cost (A)
(11-12.)	Training Cost
(11-14.)	No Cost
(12-21.)	Travel Cost (A)
(13-9.)	No Cost
(13-18.)	No Cost
(13-21.)	Travel Cost (A)
(14-11.)	No Cost
(14-18.)	Travel Cost (S)
(14-21.)	Travel Cost (A)
(15-16.)	Training Cost
(15-17.)	No Cost
(16-21.)	Travel Cost (A)
(17-15.)	No Cost
(17-21.)	Travel Cost (A)
(18-19.)	Separation Processing Cost
(19-20.)	Travel Cost (S)
(21-22.)	No Cost

(21-23.) First Term Attrition Cost After Accession
Process

3. Definitions.

a. Nodes (Activities)

- (1.); (2.) AFEES. Mental and physical testing and preparation for movement to Recruit Training.
- (3.); (4.) Personnel Processing. Processing upon arrival at Recruit Training Depot. Administration, clothing issue, and other preparations that take place before and during Recruit Training.
- (5.); (6.) Recruit Training. Basic military training for accessions.
- (7.) Recycle/Separation. Separation from the service or recycle through a part or all of Recruit Training.
- (8.) Leave. Leave of up to 10 days taken (optionally) after Recruit Training. Cost applied with total pay and allowances for the accession process period.
- (9.); (10.) Specialized Skill Training. Initial skill training received as part of initial entry training while in a trainee status (Resource identification code 0137).
- (11.); (12.) Specialized Skill Training (Other Service). Initial skill training by other services of trainees.
- (13.) Recycle, Separate, Assign to Unit. Trainees removed from normal training cycle for recycle, discharge or direct assignment to operational duty.

- (14.) Recycle, Separate, Assign to Unit. Trainees removed from normal training cycle for recycle, discharge or direct assignment to operational duty.
- (15.), (16.) Additional Specialized Skill Training. Additional specialized skill training in more advanced skill training or functional training.
- (17.) Recycle, Separate, Assign to Unit. Trainees removed from normal training cycle for recycle, discharge or direct assignment to operational duty.
- (18.), (19.) Separation Processing. Administrative activity associated with separation from the Marine Corps.
- (20.) Home. Arrival of separatee at his home.
- (21.) First Duty Station. First permanent assignment for operational duty.
- (22.) Complete First Enlistment. Completion of four (or more) year enlistment.
- (23.) Separation Prior to End First Enlistment. Marines separated for physical, disciplinary or other reason prior to completion of first enlistment.

b. Arcs (Cost)

- (1-2.) Examining. The proportionate examining cost share for each accession
- (2-3.), (6-9.), (6-11.), (8-9.), (8-11.), (10-15.), (10-21.), (12-21.), (13-21.), (14-21.), (16-21.), (17-21.) Accession Travel. PCS cost associated with all travel from AFEES to training/ between training and to first duty station.

(3-4.)	<u>Personnel Processing.</u> The share of training/training support costs associated with inprocessing recruits at the depot.
(4-5.)	No Cost.
(5-6.)	<u>Recruit Training.</u> Costs of Recruit Training: Instructors, BOS to include expendables, ammunition, other training support.
(5-7.)	No Cost.
(6-8.)	<u>Leave.</u> Trainee pay and allowances included in total calculation for six months as E-1. Not to exceed 10 days.
(9-10.), (15-16.)	<u>Specialized Skill Training.</u> Costs of initial skill training. Includes: Instructor, BOS, and other training support costs.
(9-13.)	No Cost.
(11-12.)	<u>Specialized Skill Training (Other Service).</u> Costs to other services of training Marine enlisted accessions.
(11-14.)	No Cost.
(13-9.)	No Cost.
(13-18.)	No Cost.
(14-11.)	No Cost.
(14-18.), (19-20.)	<u>Separation Travel.</u> PCS costs associated with separation travel.
(15-17.)	No Cost.
(17-15.)	No Cost.
(18-19.)	<u>Separation Processing.</u> Costs of separating accessions who do not complete training.
(21-22.)	No Cost.

(21-23.)

First Attrition Cost After Accession Process. The costs of attrition for enlisted who do not complete first tour after arrival at first operational duty. Costs include outprocessing, travel, bonus and any other costs. No pay and allowance cost.

E. Air Force Accession Process Network

Figure 5 shows the simplified and reconfigured Air Force network. The sections below cover:

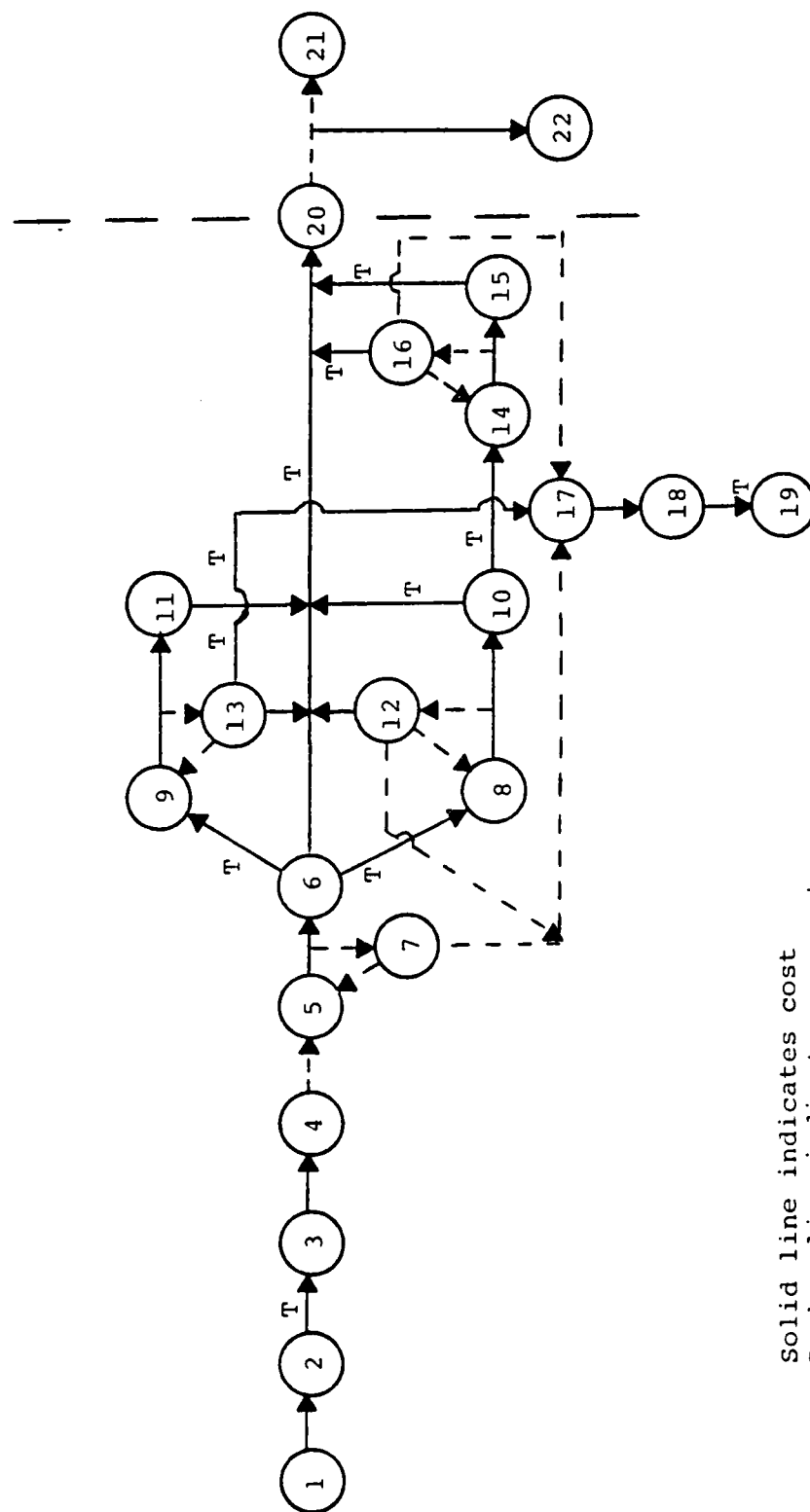
- Identification of Nodes
- Identification of Arcs
- Definitions
 - Nodes
 - Arcs

1. Identification of Nodes.

Nodes are defined for the network in Figure 5.

- (1.) Arrive at AFEES
- (2.) Depart AFEES
- (3.) Arrive Personnel Processing
- (4.) Complete Personnel Processing
- (5.) Start Recruit Training
- (6.) Complete Recruit Training. Some trainees directed to first duty assignment.
- (7.) Recruit Training Losses Identified: Recycle or Separate
- (8.) Start Initial Skill Training
- (9.) Start Initial Skill Training (Other Service)
- (10.) Complete Initial Skill Training
- (11.) Complete Initial Skill Training (Other Service)
- (12.) Loss Identified: Recycle, Separate, Direct Assignment to First Duty
- (13.) Loss Identified: Recycle, Separate, Direct Assignment to First Duty
- (14.) Start Additional Specialized Skill Training
- (15.) Complete Additional Specialized Skill Training
- (16.) Loss Identified: Recycle, Separate, Direct Assignment to First Duty
- (17.) Discharge Identified-Start Separation
- (18.) Complete Separation Outprocessing

Figure 5. AIR FORCE ACCESSION PROCESS NETWORK



- (19.) Home
- (20.) First Duty Assignment
- (21.) End First Enlistment
- (22.) Separation Prior to End First Enlistment.

2. Identification of Arcs.

- (1-2.) Examining/Processing
- (2-3.) Travel Cost (A)
- (3-4.) Personnel Processing Cost
- (4-5.) No Cost
- (5-6.) Recruit Training Cost
- (5-7.) No Cost
- (6-8.) Travel Cost (A)
- (6-9.) Travel Cost (A)
- (6-20.) Travel Cost (A)
- (7-5.) No Cost
- (7-17.) No Cost
- (8-10.) Training Cost
- (8-12.) No Cost
- (9-11.) Training Cost
- (9-13.) No Cost
- (10-14.) Travel Cost (A)
- (10-20.) Travel Cost (A)
- (11-20.) Travel Cost (A)
- (12-8.) No Cost
- (12-17.) No Cost
- (12-20.) Travel Cost (A)
- (13-9.) No Cost
- (13-17.) Travel Cost (S)
- (13-20.) Travel Cost (A)
- (14-15.) Training Cost
- (14-16.) No Cost
- (15-20.) Travel Cost (A)
- (16-14.) No Cost
- (16-20.) Travel Cost (A)

- (17-18.) Separation Processing Cost
- (18-19.) Travel Cost (S)
- (20-21.) No Cost
- (20-22.) First Term Attrition Cost After Accession Process.

3. Definitions.

a. Nodes (Activities)

- (1.), (2.) AFEES. Armed forces examining and entrance station. Mental and physical testing and preparation for movement to Recruit Training.
- (3.), (4.) Personnel Processing. Initial activity upon arrival at Recruit Training related to administration, clothing issuance and other preparations prior to start of Recruit Training handled by the personnel processing group.
- (5.), (6.) Recruit Training. The basic military training provided to enlisted entrants as part of initial entry training.
- (7.) Separation/Recycle. Activity associated with identifying trainees for separation from the service or recycling through a part or all of Recruit Training.
- (8.), (10.) Specialized Skill Training. The initial skill training received by enlisted persons as part of initial entry training (trainee status-resource identification code 0138).
- (9.), (11.) Specialized Skill Training (Other Service). Specific training by other services of trainees for initial skill.

- (12.) Identified for Separation/Recycle, or New Training/Sent to First Duty Assignment. Activity associated with identifying trainees undergoing specialized skill training for separation, recycle through the same training, recycle through a different training course, or sent directly to first duty assignment without completion of specialized skill training (directed duty assignment).
- (13.) Identified for Separation/Recycle, or New Training/Sent to First Duty Assignment. Activity associated with identifying trainees undergoing specialized skill training for separation, recycle through the same training, recycle through a different training course, or sent directly to first duty assignment without completion of specialized skill training (directed duty assignment).
- (14.),
(15.) Additional Specialized Skill Training. Follow-on specialized skill training after initial skill training in various special skills categorized as skill progression training.
- (16.) Identified for Separation/Recycle, or New Training/Sent to First Duty Assignment. Activity associated with identifying trainees undergoing specialized skill training for separation, recycle through the same training, recycle through a different training course, or sent directly to first duty assignment without completion of specialized skill training (directed duty assignment).
- (17.),
(18.) Separation Processing. The reverse of personnel inprocessing. The administrative activity required prior to service separation.

- (19.) Home. Arrival of separatee at his home.
- (20.) First Duty Assignment. First permanent duty station upon completion of trainee status and associated accession travel.
- (21.) End First Enlistment. Completion of first enlistment.
- (22.) Identified for Separation. Those persons separated prior to completion of first enlistment for any reason.

b. Arcs (Cost)

- (1-2.) Examining. The proportionate share of PE 81713 for all services divided by all applicants inducted.
- (2-3.), (6-8.), Accession Travel. All permanent change of station (PCS) costs associated with enlistment (6-9.), (6-20.), listed travel from AFEES to training/ (10-14.), (10-20.), (11-20.), between training courses and to first duty (13-20.), (13-20.), (15-20.), assignment whether in a trainee or transient status. (16-20.)
- (3-4.) Personnel Processing. The costs associated with PE81714F, Personnel processing activities that are proportionate to accession processing.
- (4-5.) No Cost.
- (5-6.) Recruit Training. Costs associated with Recruit Training: Instructors, Base Operating Support (BOS) to include expendables (ammunition, etc.), and other training support. Excludes pay and allowances for trainees.
- (5-7.) No Cost.

(7-5.)	No Cost.
(7-17.)	No Cost.
(8-10.), (14-15.)	<u>Specialized Training.</u> Costs associated with specialized skill training for trainees. Includes: direct support and other support costs. Trainee pay and allowances are excluded.
(8-12.)	No Cost.
(9-11.)	<u>Specialized Training (Other Service).</u> Costs of other service training. This may be attributable since it is possibly included in the other services skill training costs and is not reimbursable.
(9-13.)	No Cost.
(12-8.)	No Cost.
(12-17.)	No Cost.
(13-9.)	No Cost.
(13-17.), (18-19.)	<u>Separation Travel.</u> All PCS Costs associated with separation enlisted travel prior to arrival at first duty assignment.
(14-16.)	No Cost.
(16-14.)	No Cost.
(17-18.)	<u>Separation Outprocessing.</u> Separation costs for those accessions not completing training. The proportional share of cost of operating the personnel processing group attributable to separatees.
(20-21.)	No Cost.

(20-22.)

First Term Attrition Cost After Accession Process. The costs of attrition for first term enlistees after arrival at first permanent duty station. Outprocessing. travel, and any other costs. No pay and allowance cost.

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6-8